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13 September 1985

# USSR Report

AGRICULTURE

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13 September 1985

## USSR REPORT AGRICULTURE

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SHORTCOMINGS IN CROP MANAGEMENT IN BELORUSSIA CITED

Minsk SEL'SKAYA GAZETA in Russian 2 Jun 85 p 2

[Article: "Commentary by the USSR Ministry of Agriculture"]

[Text] Most of the republic's farms are conducting crop management on a broad front. It is notable that most of them are skillfully combining agrotechnical methods with the use of chemical means to protect the crops. Most farms in Maloritskiy, Pinskiy, Gomelskiy, Lidskiy, Kletskiy, and a number of other rayons have completed or nearly completed the entire set of postemergence jobs on harrowing and chemical weed control for grain crops and the application of retardants on winter crops. Most of the rayons in Brest and Gomel oblasts have done their second interrow tillage of potatoes.

Nonetheless, the plant health situation in the fields, the rapid growth of weeds, and the compaction of fields by the torrential rains which occurred everywhere require vigorous crop management, especially in the central and northern rayons of the republic. Certain farms are missing the optimal times for interrow tillage of potatoes and other row crops.

The Kolkhoz imeni Kalinin and the Kolkhoz imeni X s'yezd Sovetov in Chervenskiy Rayon, the Gorokhovskiy Sovkhoz and the Doynichevo Sovkhoz in Bobruyskiy Rayon, the Golubitskiy Sovkhoz in Petrikovskiy Rayon, and the Kolkhoz imeni Lenin in Kalinkovichskiy Rayon are late in conducting interrow tillage of potatoes. The potato fields there are turning green from an abundance of weeds. Even a day's delay in crop management inevitably leads to a reduced yield of this crop.

The significance of postemergence harrowing of summer grain crops is underestimated in certain farms of Dubrovenskiy, Orshanskiy, Ostrovetskiy, and Krupskiy rayons where this work has been done on just slightly more than three-quarters of the fields.

A number of beet-raising rayons of Brest and Grodno oblasts are missing the best times for cultivating and thinning sugar beets.

Unjustified sluggishness in carrying out chemical weed control of grain crops is being allowed in Dzerzhinskiy, Molodechnenskiy, Shklovskiy, Goretskiy, Orshanskiy, Ushachskiy, and a number of other rayons where tillage is carried out on overgrown fields. Cases are occurring where the technological requirements of using herbicides are not observed. At the Domovitskiy Sovkhoz

and the Kolkhoz imeni Lenin in Chervenskiy Rayon, raysel'khozkhimiya specialists are at fault for allowing the preparation of working solutions without weighing the components, not following herbicide dosages, and violating safety procedures. The poor work organization here has led to downtime of helicopters and wide-span rod equipment. These farms have not used retardants on high-yield winter crops at all.

On the whole retardants are used only on the half the planned fields in farms in Vitebsk and Mogilev oblasts.

Work on weed control in the flax fields must be intensified in most of the flax-raising rayons of Brest and Gomel oblasts.

Pests and diseases can do substantial harm to the harvest. Intensive infestation of sugar beet crops with sugar beet leaf miner flies continues. Opaque carrion beetles can do substantial harm to late plantings of this crop. A large number of rapeseed blossom beetles are expected and clover seed-eaters have been observed on the seed plants of clover. Swedish flies will be a threat to late plantings of barley and oats in the first 10 days of June in the central and northern zones of the republic. Insecticides should be added when chemical weed control is done on these fields.

Studying local situations shows that certain farm and Sel'khozkhimiya managers and specialists are not handling the plant health situation well and do not utilize all opportunities to carry out management work quickly and well.

Up to the present time one out of three sprayers has not been put to work in farms and associations of Vitebsk Oblast Sel'khozkhimiya and one out of four in Mogilev Oblast farms. A great deal of equipment is standing idle in Minsk Oblast. The experience of the Kolkhoz imeni Ordzhonikidze merits attention; this kolkhoz assigned the most experienced machine operator to do chemical treatment of crops and put its own equipment on the job. It is also important that weed control there is even waged while preparing fertilizers and composts; semi-fallow tillage of fall plowed fields and other measures are widely used.

Considering the condition of the crops and the phases of plant development, the agronomic services of kolkhozes and sovkhozes must now immediately speed up the pace of crop management. Interrow cultivation of potatoes, beets, and feed root crops must be accelerated. The treatment of grain crops with herbicides must be completed in 3-4 days and flax weeding must be activated. There is a sufficient quantity of equipment and pesticides at the farms and rayon associations of Sel'khozkhimiya to complete crop management promptly. All the sprayers must be put to work and their highly productive use for the entire daylight period must be organized. When necessary, we should maneuver with aviation.

Exemplary crop management in each rayon and farm of the republic is a guarantee for obtaining the highest yield from all agricultural crops and fulfilling socialist obligations accepted for the current year.

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CSO: 1824/478



## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SHORTCOMINGS IN CROP MANAGEMENT REVIEWED

Minsk SEL'SKAYA GAZETA in Russian 22 May 85 p 2

[Article: "Crop Management -- Speed and Quality"]

[Text] Operational Survey by the Belorussian SSR Ministry of Agriculture

Pleasant sunny weather promotes the rapid growth and development of plants. Summer grain and leguminous crops are in the bushing-out phase everywhere, flax has germinated, and stalk growth in winter crops continue. The crops are in good condition at most farms. Now the main attention of agronomists of kolkhozes and sovkhozes and specialists from the rayon agricultural administration, Sel'khozkhimiya associations, and plant protection stations should be directed to creating optimal conditions for crop growth and development.

However, the adequate moisture in the soil and the high temperatures also promote the growth of weeds. Their density is higher this year than in past years, especially in sections where the stubble was not broken and fall plowing not done promptly and well in the fall. Here are examples.

From 600 to 800 weeds per square meter of barley crops were counted before herbicides were applied at the 40 let Oktyabrya Kolkhoz and the Kolkhoz imeni Dzerzhinskiy in Rechitskiy Rayon. A similar situation exists in a number of farms in Petrikovskiy, Luninetskiy, and Gluskiy rayons.

In Pinskiy Rayon optimal conditions for applying herbicides to the soil under sugar beets, feed root crops, and corn were created as early as 7 May. However, the local rayon agricultural administration (chairman -- V. Ivantsov) and the plant protection service were unprepared for this work. Spray booms were not mounted and machine units were not adjusted to the norm for applying chemicals. The engineering service did not check their technical preparedness. For this reason, the application of herbicides to combat weeds and pests was completed 4-5 days late. Moreover, eight sprayers at the rayon associations were not in use, while seven of the rayon's kolkhozes and sovkhozes do not have this equipment at all.

Serious omissions in protecting plants were identified in Smolevichskiy Rayon.



At this point, fan sprayers have not been converted to boom sprayers in all the Sel'khozkhimiya associations and at kolkhozes and sovkhoses. This has been found in Belynichskiy, Berezinskiy, Rechitskiy, and Petrikovskiy rayons. Orchards have not been treated there even though the number of pests in them is higher than what is permitted. The agronomists of rayon plant protection stations are busy gathering reports instead of organizing the labor of machine operators and checking the quality of chemical treatments. Delays in applying herbicides to grain crops are being permitted in Berezovskiy, Zhabinkovskiy, Korelichskiy, Novogrudskiy, Dzerzhinskiy, and Krupskiy rayons. The use of "kampozan" [translation unknown] to combat rye lodging threatens to break down in Minsk, Mogilev, and Vitebsk oblasts. Retardants have only been used on a few hectares in Gantsevichskiy, Lyakhovichskiy, Zhlobinskiy, Checherskiy, Mostovskiy, Lidskiy, Berezinskiy, Slutskiy, and Nesvizhskiy rayons. They have not treated one hectare of rye at farms in Oshmyanskiy, Svetlogorskiy, Ostrovetskiy, Kormyanskiy, and Lelchitskiy rayons.

Special attention should be devoted to applying "kampozan" to winter rye. All fields with a planned yield of more than 25 quintals per hectare must be treated to combat lodging. There are 51,000 hectares of this crop in Brest Oblast; 46,000 -- in Vitebsk Oblast; 54,000 -- in Gomel Oblast; 57,000 -- in Grodno Oblast; 68,000 -- in Minsk Oblast; and 40,000 hectares -- in Mogilev Oblast.

The situation which has developed in spring fields demands that effective measures be taken to eliminate the identified shortcomings in crop management. There is every opportunity to promptly eliminate the mistakes named above at kolkhozes and sovkhoses, Sel'khozkhimiya associations, and plant protection stations. Everything depends on the organization and teamwork of specialists from the agronomic service of the rayon agricultural administration, machine operators, and all grain growers.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

POOR WEED CONTROL BY KHOYNIKSKIY RAYSEL'KHOZKHIMIYA CRITICIZED

Minsk SEL'SKAYA GAZETA in Russian 24 May 85 p 2

[Article by V. Mikhaylov: "Prisoner of Weeds"]

[Text] If the report data which comes from the Khoynikskiy Raysel'khozkhimiya to the Gomel Oblsel'khozkhimiya is to be believed, weed and pest control at the rayon's farms has been organized in an exemplary way. Thus, chemical weeding of grain crops has been carried out on an area of 2,772 hectares -- 68 percent of the planned amount -- in recent days. On paper it would seem everything is completely up-to-date. But in reality?

Specialists from the administration of plant protection at Belsel'khozkhimiya inspected how this work has been organized at kolkhozes and sovkhoses. As a result, flagrant neglect has been revealed and the fate of the harvest is in danger. Raysel'khozkhimiya (chairman V. Rezhik and O. Milash, acting chief of the plant protection station) has ignored quality in pursuit of fulfilling the plan. Here are the facts.

Up to this point the equipment and implements for carrying out chemical weed control have not been prepared for work in Raysel'khozkhimiya. Of the existing 17 sprayers, 9 fan-types have not been converted into rod-types. Back in April the rayon association received seven sets of new spray booms but they lie idle in a warehouse.

Grain crops have become overgrown at the Kolkhoz imeni Kalinin and the Oktyabr' Kolkhoz and the Sudkovo and Borisovshchina sovkhoses where the rayon sel'khozkhimiya has performed a substantial amount of work to protect plantings. In the presence of the main agronomist of the Pobeda sotsializma Sovkhoz, V. Yadchenko, Sel'khozkhimiya machine operators allowed obvious mistakes in barley fields. In particular, the distance between passing machine units was from 40 to 70 meters, which exceeds the operating width of the sprayer by a factor of 3-4. Specialists counted more than 200 weeds in one square meter on the fourth day after this chemical weed control.

Who needs that kind of work?

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### RESULTS OF USING WIDE-SWATH WEED CONTROL SPRAYERS PRAISED

Minsk SEL'SKAYA GAZETA in Russian 24 May 85 p 2

[Article: "Resourcefulness Helped"]

[Text] Converted sprayers are helping accelerate the pace of chemical weed control of summer grain crop farms in Mostovskiy Rayon. Their operating width has been increased from 8 to 12 meters and additional reservoirs for chemicals have been installed. As a result, the productivity of sprayers, which are also used for weed control in fields of other crops and in treating winter crops against lodging, has increased by a factor of 1.5. Rayon machine operators are the leaders in the Grodno region for pace of chemical weed control. They have already treated more than 3,000 hectares of cereal crops.

Wide-swath machine units are also used in harrowing plantings. This effective agricultural method, whose role is especially great in rainy springs, is not only used on sugar beets, corn, and feed crops, but also barley and oats. Pre-emergence hilling of potatoes is being carried out at the same time.

Farms in Shchuchinskiy, Grodnenskiy, and Lidskiy rayons are counting on wide-swath equipment, and despite the late spring they are handling the set of crop management jobs faster than usual.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BREST OBLAST FARMERS PREPARE FOR HARVEST

Minsk SEL'SKAYA GAZETA in Russian 2 Jul 85 p 1

[Article: "While the Ear is Gathering Strength"]

[Text] The past rains in the Poles'ye region helped form a good ear. The condition of the fields gladdens farmers who assumed the obligation of harvesting 28 quintals of grain per hectare. And although it is a long way from harvesting season, RAPO partners are actively preparing for the harvest.

Kolkhozes and sovkhoses in Brest Oblast and the collectives of Sel'khoztekhnika associations have already put more than 90 percent of the combines on the readiness line. Considering that after the heavy winds and torrential rains crops in many areas have become lodged, machine operators have fitted their machines with attachments to harvest them. A half-caterpillar traction has been prepared for machine units which work in peat bogs.

A centralized dispatching service is being organized. Truck caravans for hauling grain are being organized at enterprises of the oblast motor vehicle administration and Sel'khoztekhnika. Grain drying units and covered threshing floors and sheds have been fixed up and grain receiving enterprises have been prepared for work.

The oblast's kolkhozes and sovkhoses must harvest about 400,000 hectares of grain and leguminous crops.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BETTER WEED CONTROL NEEDED TO PROTECT GRAIN YIELD

Minsk SEL'SKAYA GAZETA in Russian 29 May 85 p 1

[Article by P. Zharskiy]

[Excerpts] Grain crops at Gluskiy Rayon farms have begun growing vigorously after the recent rains. But weeds are also gathering strength. And if the "green fire" is not stopped in time, there will be a real threat of not reaching the yield level planned for the last year of the five-year plan period.

The rayon's kolkhozes and sovkhoses are placing great hopes in plant protection work on their partners in the agroindustrial complex -- raysel'khozkhimiya employees. Almost all the equipment to apply toxic chemicals has been concentrated there and they have experienced specialists and real masters of their work.

And one more comment -- on the role of specialists of the rayon agricultural administration in improving crop management work. Unfortunately, they are taking a passive posture. The administration's agronomists must give business-like, practical assistance to farm chemical workers and agronomists in organizing this work. It is time to use authority against those who are not working hard.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

DELAYS IN PLANTING CITED

Minsk SEL'SKAYA GAZETA in Russian 17 May 85 p 1

[Article: "Operational Survey"]

[Text] Almost one-quarter of the flax and corn fields have not been planted yet and sugar beet planting is not completed. Flax planting is unjustifiably delayed in Smorgonskiy, Novogrudskiy, and Iyevskiy rayons where slightly more than half the fields have been planted, and the planting of this crop in most rayons of Vitebsk and Mogilev oblasts needs to be stepped up. Less than half of the corn fields have been planted in Belynichskiy, Shklovskiy, Goretskiy, Buda-Koshelevskiy, and Baranovichskiy rayons. Farms in Stolbtsovskiy and Soligorskii rayons must immediately finish planting sugar beets.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BELORUSSIAN MD PERSONNEL ASSIST AGRICULTURE

Moscow TRUD in Russian 5 Jul 85 p 4

[Article: "In Defiance of the Elements"]

[Text] The hurricane started at midnight. Gusts of wind with hail demolished trees and knocked down electric power line poles. Rayons on the border between Minsk and Grodno oblasts suffered especially. Party and Soviet organs appealed for help from the commanders of the Red Banner Belorussian Military District. The "Harvest" alarm roused motorized riflemen, sappers, and signalmen long before dawn. They were quickly brought to the place where the event was happening. When the hurricane began to abate, the subdivisions began to perform their tasks. Above all damaged communications had to be fixed, electricity had to be supplied, and obstructions in roads had to be cleared away.

The soldiers worked like shock workers. Soon current was returned to industrial enterprises and kolkhoz livestock units, and motor vehicle and scheduled bus traffic was restored on roads.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

CROP DAMAGE AFTER MARITIME KRAY TYPHOON

LD150819 Moscow Domestic Service in Russian 0400 GMT 15 Aug 85

[Text] A typhoon raged for several days over Maritime Kray. Our correspondent Oleg Padenko reports:

[Padenko] As soon as the typhoon had swept over Maritime Kray at a truly furious speed, we immediately flew in a helicopter around the places where it had been most active. All of the valleys among the volcanoes where there is fertile earth, rare for Maritime Kray, were under water. There were water falls in place of roads. This is what it was like over the whole 1,500 km route which we flew over. The flight was led by Nikolay Petrovich Taras, head of the Agricultural Department of Maritime CPSU Kraydom.

[Taras] We flew through Shkotovskiy Rayon, Partizanskiy and Lazovskiy Rayons, over seven or eight Rayons...

[Padenko] These are the Rayons, as we have just ascertained for ourselves, which have suffered the most from the typhoon.

Tell me, how did it start in the Kray, what did it do here?

[Taras] One can say for sure that at first the wind speed was 25-30 meters per second, and that there was rain, that is over 24 hours a month's norm of rain. In the areas that we flew through, we saw corn that had been felled--the corn is already 3 meters high: we saw cabbage, tomatoes and other vegetable crops through which water was running, not to mention grain crops under water. We saw bridges and road beds that had been swept away. Although on the whole the Kray headquarters has these facts at its disposal, it did not take Maritime Kray dwellers by surprise. In principle, as the norm, there are no interruptions to supplies to the population. Work is being carried out in an organized fashion in the fields. We cannot get used to such weather, we don't like it, but we have to act to take control of the situation, as they say. We have seen rural toilers, state and collective farm workers, equipment working and people working. We have seen active help from town dwellers.

CSO: 1824/531

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### FIELD WORK AND WEATHER CONDITIONS IN ALMA-ATA OBLAST

Alma-Ata KAZAKHSTANSKYA PRAVDA in Russian 10 Jul 85 p 1

[Article by D. Gutenyev: "The Grain Grower's Arsenal"]

[Text] About 77,000 hectares in the Iliyskiy Rayon are occupied with grain. These fields differ. The smallest portion is under irrigation. The remainder is in the non-irrigated region of Karaoy. It is not every year--usually one in nine--when the semi-desert yields a gift of a healthy spike. But every time before engaging in the harvest of even low-yield grain crops, the farmers very conscientiously inspect and ready their arsenal. If they anticipate small harvests it becomes important not to lose even a single kernel. If the harvest after many years of drought promises to be abundant, then they especially must gather all that has been grown and sing out the praises of the yellow spike. The outlook for the current harvest is more favorable than it has been for the last six years in these regions.

S. Yermekbayev, chairman of the Iliyskoye Regional Agricultural-Industrial Association, states, "That is why preparation for the harvest is conducted with special care. There is hope that our debt to sell grain to the state, which has taken shape over the last four years, can be eliminated and the five-year plan fulfilled." To accomplish this all services and machinery must work continuously. The current harvest's arsenal contains about 400 grain-harvesting combines. The load for each, as we see it, is 190 hectares. All machinery has been combined into 26 mobile tractor detachments according to farm and work brigades. To maintain continuous operation, this work has been provided with work sections of repairmen, trouble-shooters and servicemen.

For combine work, about 200 additional equipment operators have been attracted from industrial enterprises and construction sites in the rayon. Sufficient supplies of fuels and lubricants have been stockpiled.

On a majority of farms expanded application of progressive harvesting methods is being proposed. For example, on the "Kaskelenskiy" and "Iliyskiy" sovkhoses, based on last year's experience, a batch method will be used, while the Sovkhoz imeni Tyumebayev will utilize a combined trailer method to transport grain from under the combines. The "Kaskelenskiy," over the course of several years, has proven itself with the special collective "vakhtovyy" method.

Work using progressive technology allows these farms to increase the productivity of labor and make do with fewer trucks and trolley-trailers. This experience is being transferred to the fields of its neighbors.

One must say that now, as in past years, great assistance is being provided by our partners in the agro-industrial complex. The rayon agricultural farm machinery association has formed an autonomous detachment in which there are 18 combines and technical maintenance work crews.

Our primary grain growing expanses are situated within the boundaries of Karaoy. All of the 22 work crews' equipment and machinery has been overhauled.

Often farms lose much in that they provide the state with raw, poorly cleaned grain. But today, if the need arises for purifying and drying, there are 29 mechanized threshing floor weighing points for this purpose. However, grain loader repair is being held back by insufficient deliveries of various conveyers and belts by the agricultural machinery, spare parts, fertilizer and other equipment association Selkhoztekhnika. A critical situation exists with storage batteries due to undershipments of tractor and motor vehicle batteries by the very same Selkhoztekhnika. Almost two-thirds of the harvesting machines now lack power supply units.

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CSO: 1824/484



## MAJOR CROP PROGRESS AND WEATHER REPORTING

### PROBLEMS REPORTED IN TASHKENT HEAT-SUPPLY SYSTEM

Moscow IZVESTIYA in Russian 21 Dec 84 p 6

[Article by IZVESTIYA correspondent G. Dimov in Tashkent: "Uzbekistan: A Hard Frost in the 'Heat Belt'"; related to an article in the previous day's edition]

[Text] Yesterday, IZVESTIYA reported on the cold weather in Central Asia, including Uzbekistan. Temperatures were recorded as low as  $-35^{\circ}$ . In Syr-Darya Oblast, the freezing temperatures reached  $28^{\circ}$ , in Bukhara Oblast-- $23^{\circ}$ , in the eastern part of the Fergana Valley-- $22^{\circ}$ , and in Termez--in the "heat belt" of the nation--readings dropped to  $5^{\circ}$  [note: readings in degrees centigrade]. Overnight temperatures in Tashkent fell to  $15-16^{\circ}$ ...

Since the beginning of synoptic weather observations in Central Asia in 1881, cold extremes of this type in December have been recorded eight times--the last, in 1950. But the current cold wave is remarkable for its extended duration. Central Asia has found itself under the influence of an extended Siberian high-pressure area.

Everyone knows what winter weather in Siberia looks like: faces tightly muffled against the cold, icicles hanging from mustaches... Today, Central Asia has switched places with Siberia. Heavy snows lie in the Kirghiz and Tajikistan Mountains, as well as in the Kyzylkum.

The early onset of cold weather was felt particularly hard in the central Asian cities, especially Tashkent. That city has made considerable progress in the development of new--as well as the redevelopment of old--centralized heating systems and facilities. But, at the present time, there are interruptions in the supply of heat and hot water in a number of regions of the city. The city was not able to put all of the hot water boilers into operation that it had planned to, nor did it manage to install modern hot water radiator systems. In some places, there are still worn-out heating facilities, and heat-supply systems have not been thoroughly flushed and pressure-tested. These individual trouble-spots do not, however, explain the larger overall problem.

Our bureau was told that the pressure had dropped in a water main on Mikhail An Street, and that gas hot-water heaters were not functioning. We place a call to

the Kirovskiy rayispolkom. A day passes--again we complain: no one has shown up at the accident site. Rayispolkom chairman D. Dzhaniybekov: "That can not be--there is no problem with the cold water." Finally, a day later (after more follow-up calls), the repair crew arrived. Their reaction: "You are not the only one: what are you complaining for?" The repair work took half an hour...

But, can the frigid weather conditions really be blamed for such things as the fact that rapid route 37 from Kuyuk to the center of the city is virtually unuseable at night? The explanation is that there are not enough drivers to man the second shift. Only 87 tramcars left the depot on thursday, instead of the normal 127-- --the maintenance crews are understaffed. And this in a city with a labor surplus.

Republic organizations are presently deeply involved in improving the supply of heat. Part of the gas supplies with the highest heating efficiency rating is being switched over to meet everyday consumer needs.

The cold snap has reminded us again not to put off until tomorrow what needs to be done today. As early as September, the Presidium of the Republic Supreme Soviet thoroughly and pointedly discussed letters and statements from workers concerning efforts to get Tashkent ready for the winter. This was described in a two-part article in IZVESTIYA (No's 282/283), "Heat for the City." This article also presented ideas from officials on how to provide the city with a reliable heat-supply system. And it also contained this thought: we cannot rely solely on gas; we need to construct a large-capacity thermal-electric station which can use local supplies of brown coal.

The Republic Council of Ministers held a discussion on the article within two days of its appearance. "The question of constructing a new TETs within the city of Tashkent, as raised by the IZVESTIYA article," read the official reply signed by two deputy chairmen of the Council of Ministers, "is not new. It was being discussed as far back as the 9th and the 10th Five-Year Plans. It was known even then that the Tashkent GRES could be made more cost-effective by switching it over to a centralized-heating method of operation. The cost of natural gas and oil under this method will turn out to be less, even by 1990 projections, than what we spent for them in 1980. And all of this could be accomplished within the shortest possible period of time'."

It's not new, so all the more reason to act on it! Especially since a "definitive resolution" was adopted with regard to this matter as far back as 1981. Alas, 3 years have gone by... And yet, as the saying goes, when you hold your ground on an issue,--things began to move forward immediately: literally within days, practical measures for shifting the GRES into a new operating mode had been adopted.

How much time had been wasted? How many fuel cost overruns had there been?..

Freezing weather brings problems. But, it also forces us to think more deeply and effectively, and to achieve our objectives more efficiently.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SPECIAL EQUIPMENT FOR MOLDAVIAN GRAIN HARVEST

Moscow SELSKAYA ZHIZN in Russian 17 Jul 85 p 1

/Article by Ye. Shchegirev, chief engineer-organizer for the Kolkhoz Council of the Moldavian SSR and honored engineer of the MSSR: "Rapidly and Without Losses"/

/Excerpts/ The capricious weather has disturbed somewhat the Moldavian grain growers. The harvest period is at hand and the rain which is falling from day to day is precluding the possibility of moving the equipment out onto the grain fields. Nevertheless, the present grain harvest has commenced in an organized manner in all areas. This has been promoted by a high level of equipment readiness.

The completely mechanized detachments charged with harvesting the peas, barley and wheat are setting fine examples in carrying out their work.

This year, under inclement weather conditions, extensive use must be made of the equipment maneuvering method and different variants in organizing the harvesting production line. Considerable quantities of grain have lodged in regions where the rain was accompanied by hurricane winds and heavy showers. Harvesters equipped with general-purpose or eccentric reels and grain lifters have been placed in operation on such fields.

Our machine operators are taking into account the fact that this year the grain is not very tall on many tracts. Instead of the conventional items of equipment, we are employing wide-cut ZhVN-6 harvesters on such fields. The cuttings formed by them dry out rapidly and are easily picked up and threshed. Yes and the productivity of such units is higher and, a point which is of great importance, the crop losses are reduced considerably.

This year a considerable increase will take place throughout the republic in the areas set aside for the sowing of peas. There will be more than 45,000 hectares of sowings alone at kolkhozes. A good yield is at hand -- 30-35 and more quintals per hectare. A new harvesting method has been introduced into operations in many rayons in the interest of preventing losses. It consists of cutting down the peas without the formation of wind-rows and this will accelerate the drying and threshing operations. Towards this end, use is being made of a re-equipped KS-2.1 mowing machine, on which the wind-row former is being replaced by the fastening along the sides of two boards in a manner such

that the distance between them at the end is not more than 1 meter. It is noted that industry is supplying the KS-2.1 unit in two variants -- in a set with a cutting unit finger bar and in a set with two blades but without fingers. In this case, we employ a mowing machine with two cutting unit blades and without fingers for the cutting down of peas. If this is not done, the mown mass will become entangled. It was precisely for this reason that many farms were unable to take advantage of the mentioned method and thus they sustained losses last year.

Today there are more than 400 all-round mechanized detachments in operation out on the kolkhoz fields. Five hundred and twenty seven special subunits have been created for harvesting the straw and preparing the soil for next year's harvest. All of them have been supplied with equipment and personnel sufficient for double shift operations.

The republic's machine operators are displaying a great amount of energy and activity in launching a socialist competition and they are striving to harvest the crops and supply the homeland with more grain on schedule and without losses.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### PROBLEMS WITH DELAYS IN RICE PLANTING REPORTED

Tashkent PRAVDA VOSTOKA in Russian 4 May 85 p 1

[Article in the "Tempo of the Day" column: "Speed-up Rice Planting"]

[Text] The difficulty inherent in modern-day planting operations is that they are highly intensified. Farmers have to accomplish many different types of work all in the same operation, which in years past, could usually have been spread out over a greater length of time. Many farms have still not completed the planting of lucerne, whereas the time has already arrived for cultivation of cotton and corn, and it is well into the period for providing green feeds to cattle.

This is also the time for the sowing of rice. Many farms, however, have been slow to do so. Rice growers in Surkhan-Darya Oblast, especially, are behind in their work. Whereas last year on this date, almost two thirds of the area allocated to rice here had been sown, this year, the total is 40.7 percent. Farms in Syr-Darya Oblast are also lagging behind last year's pace. The mean indicator for the republic as a whole is also down from last year.

By far the largest rice planting is in the Kara-Kalpak ASSR. Unreliable weather conditions here continue to complicate matters, with the result that a number of fields are still not ready for planting. It is essential that this work be completed as soon as possible so that the seeding equipment can be moved into the fields and seeding operations carried out within the optimal planting period.

While plan objectives for rice planting call for completion of this work by the first of June in the Kara-Kalpak ASSR, it must be done no later than the 20th of May in Tashkent and Namangan oblasts. A limited number of days remain for farmers in Surkhan-Darya Oblast to make up for the lost time.

Seed and equipment are in good supply on all farms. In order to complete the planting within the optimal time-frame, work must be organized in double shifts, people and machinery must be properly assigned, and suitable working conditions and rest periods must be established for those engaged in the planting operations. Every day and hour of good weather must be exploited with the highest degree of efficiency. And one thing more: plan objectives with regard to regionally adapted varieties must be closely adhered to. Then, presumably, with proper care the harvest will be abundant and will mature at the right time, and the nation will have more rice of higher quality.



MAJOR CROP PROGRESS AND WEATHER REPORTING

RECORD COLD REPORTED IN UZBEKISTAN

Tashkent PRAVDA VOSTOKA in Russian 21 Dec 84 p 4

[Article by V. Khisamiyeva, head of the long-range weather forecasting department in the UzSSR Hydrometeorological Center: "The Stern Face of December"]

[Text] Something less than the usual weather has been observed in the final months of the outgoing year. In October, there were extremely high temperature readings, the likes of which had not been seen in 106 years of observations. The end of November brought rain and hail storms--a purely springlike phenomenon. But, with the first day of December, a sharp cooling-off period began, which was accompanied by heavy snowfalls. Snow fell steadily during the entire first 10 days of the month, and the depth of the snow-cover in the level part of the republic reached 30 centimeters, while in the mountainous regions it was more than a meter.

Cold fronts, forming in the Arctic regions, moved slowly, one after the other, through the Urals and Western Siberia into the east, covering Central Asia as well. In Siberia, in the center of the cold front, frost conditions reached 40 degrees below freezing on the centigrade scale, and even lower. Night-time temperatures in Uzbekistan dropped to 15-20 degrees below freezing, while reaching 23-28 below in Dzhizak, Syr-Darya and other northern oblasts. Tashkent recorded its lowest temperature on December 16--16.5 degrees below.

The absolute minimum temperature in Tashkent for December was recorded at 29.5 degrees below freezing on December 20, 1930. But the 1930 cold snap lasted for no more than a week, after which, as most often occurs in our latitudes, an abrupt warming trend moved in.

In the first half of December, the average air temperature in Uzbekistan was from 6 to 15 degrees lower than normal. Cold weather--for the most part, without precipitation--will continue in the second half of the month. Persistent cold spells of this sort in December have been observed in 1881, 1910, 1920, 1929, 1932, 1944, 1946 and 1950. But, this is the first extremely cold December since 1950.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SUCCESSSES, SHORTCOMINGS OF EARLY SPRING PLANTINGS NOTED

Tashkent PRAVDA VOSTOKA in Russian 7 Mar 85 p 2

[Article by V. Neyburg, staff correspondent for PRAVDA VOSTOKA]

[Excerpts] The winter here in the south has been quite severe this year. But, for about the past month, there has been little reason to complain about the weather.

On many farms in Surkhan-Darya Oblast, virtually every hour of good weather is given over to agricultural management concerns. The schedule of spring field work is extensive: sowing of lucerne, planting of early vegetables, potatoes, and mulberry trees.

If the figures from agricultural operations in Surkhan-Darya Oblast are compared with figures from other oblasts in the republic, the conclusion is striking: farms of the Surkhan Valley are clearly in the lead.

But, is there any need for comparison? The South is the South. Here, it is possible, and even necessary this early, to conduct many operations at a pace which could not be sustained in oblasts to the north.

Farmers in Surkhan-Darya Oblast have finished with the sowing of spring grain crops on irrigated land. Supplemental fertilizer applications and irrigation have been carried out on all the fields bearing winter crops. Farms in Altynsayskiy Rayon have completed the planting early vegetable crops, and those in Angorskiy and Dzharkurganskiy rayons have managed the planting of early potatoes. This work will soon be completed in Shurchinskiy Rayon.

Southern farmers are lagging behind in the planting of feed-type root crops--primarily beets. Nearly 1800 hectares of irrigated land has been allocated to this crop. Beets are an excellent lactiferous feed. It would seem that the loss of even a single day here could not be tolerated: the earlier you plant, the earlier the feed finds its way into dairy herd ration. But no. Surkhan-Darya Oblast farmers have been planting beets for almost a month, and still half of the land set aside for the crop remains to be planted. The only welcome exceptions to the general rule are found in the Termezskiy and Lenin-yul'skiy rayons, where farms have exceeded plan projections for beet planting.

Delays also exist in the planting of orchards, vineyards and mulberry trees.

The excellent example set by the leading farms, unfortunately, is not being followed everywhere in the republic.

Southerners are the first to greet the spring. They must necessarily be fully prepared. In this preparation is the guarantee of successful realization of the exalted objectives to which farmers of Surkhan-Darya Oblast have committed themselves for the final year of the five-year plan.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SLOWNESS OF REPAIRS ON AGRICULTURAL EQUIPMENT RAISES CONCERN

Tashkent PRAVDA VOSTOKA in Russian 1 Mar 85 p 2

[Article by PRAVDA VOSTOKA staff correspondent A. Khayrutdinov under the rubric "A Sharp Signal": "Time Is Being Wasted"]

[Text] Tractors hauling loads, agricultural supplies and equipment, and other signs of the coming spring are being seen with increasing frequency. The frosts which arrived early in the Kara-Kalpak ASSR and the deeply frozen soil last autumn prevented fall plowing, leveling and flushing of cropland. This whole range of operations will now have to be done in the spring, prior to planting.

That is why it is so important to finish equipment repairs and get the crews fully equipped as early as possible. But, in this autonomous republic, it is evident that there is no rush to do so.

The kolkhozes and sovkhoses which have well-equipped, heated repair facilities can be counted on one's fingers. On most of the farms, repair work is done under the open sky, and work was halted from November to February due to freezing conditions.

In February, it warmed up, and it seemed that the pace of the repair work might pick up, but here the force of inertia came into play. Many supervisors still are just barely moving.

Such was the case in Karauzyakskiy Rayon. The "Moscow" sovkhos here is the largest cotton-planting farm in the region.

Nor is the repair situation any better on other sovkhoses in the rayon--the imeni Kalinin, the Kuralpa, the Karauzyak, and a number of others. As of February 26, repairman's hands had yet to touch 368 tractors, more than 100 plows, 535 harrows and 50 seeders. The farms are suffering a shortage of qualified repairmen. The slogan, "When you live in the country, you should know your equipment," as yet remains little more than wishful thinking.

Farms in neighboring Takhtakupyrskiy Rayon are not faring any better with their equipment repairs.

The majority of the equipment brought in for repairs has not been cleaned of last year's dirt. The moving track on the caterpillar tractors is also clogged with dirt. Nor have all of the commissions set up to receive equipment for repair gotten down to work.

A considerable amount of equipment is not ready for planting operations in Leninabadskiy, Shumanayskiy and Chimbayskiy rayons.

Officials at kolkhozes and sovkhoses in this autonomous republic have given their assurances that all planting equipment would be placed on the ready line by the first of March. But these assurances have not been backed up with action.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SPECIAL EMPHASIS PLACED ON MAINTENANCE OF GRAIN HARVESTING MACHINERY

Tashkent PRAVDA VOSTOKA in Russian 19 Apr 85 p 3

[Article titled: "Grain-Harvesting Equipment--In Readiness!"]

[Text] This article concerns plans to designate a month-long period as a time for timely and skillful maintenance and repair of equipment to be used for the harvesting of cereal grains during the 1985 harvest.

Grain growers in this republic have committed themselves to some lofty objectives in the name of socialism this year--the production by sovkhozes, kol-khozes and other agricultural enterprises of 1.93 million tons of grain, of which 1.2 million tons will be sold to the state. The greatest part of the grain to be produced and stockpiled will be provided by cereal grains.

The UzSSR Ministry of Agriculture and Goskomsel'khoztekhnika [State Committee for the Supply of Agricultural Production Equipment], along with the Republic Committee for Agricultural Workers Trade Unions have declared the period from April 15 to May 15 a time of special attention to the maintenance and repair of grain-harvesting equipment. It is expected that during this period, unfinished work in these areas will be completed.

To that end, each kolkhoz, sovkhoz and raysel'khoztekhnika [Rayon Agricultural Equipment Association] should mandate and implement specific measures aimed at obtaining high-quality repair work on grain-harvesting equipment, motor-transport facilities, grain-loaders, cleaning equipment and weighing units. In order to implement this month-long period, oblast-level operational staffs made up of equipment operators, drivers and mechanics, all drawn from various branches of agriculture, must be established and given functional authority. Brigades and links specializing in repair work must be organized and normal living and working conditions set up for them. Combine operators, their assistants, and drivers must be rated for efficiency of output with an eye to organizing the operation of each harvesting unit and motor vehicle in two shifts. All combines and headers must be tightly sealed and outfitted with attachments designed to prevent grain losses.

During the designated month-long period, existing equipment maintenance facilities are expected to be put in operational readiness, staffed with experienced

master mechanics, and supplied with essential machine tools, fire-extinguishers, sand, accessory devices and spare parts exchange facilities. Socialist competitions need to be organized, and safe working conditions provided to the workers.

Prize monies have been set aside to be awarded to the winners of this republic-wide competition in the repair of grain-harvesting equipment.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### CONCERNS OVER LINGERING WINTER, EQUIPMENT SHORTAGES REPORTED

Moscow SEL'SKAYA ZHIZN' in Russian 15 Mar 85 p 1

[Article by M. Babintsev, SEL'SKAYA ZHIZN' correspondent in the UzSSR]

[Excerpts] New SEL'SKAYA ZHIZN' staff correspondent, Mikhail Yegorovich Babintsev, has arrived on assignment in Uzbekistan. Today his first report is filed from that republic.

Spring in the south, with its welcome warmth, is currently overdue. It is already time for the almond tree to blossom, and for the woods to adorn themselves with new leaves, while here and there, the snow still lies, and in the mornings, there are frosts. But, farmers in this republic have lived with concerns about the coming harvest for a long time. They are top-dressing the winter crops, tending to the lucerne fields, and cleaning up the irrigation and drainage systems. Vegetable growers have much work ahead of them. They have made better preparations in their plots for the new season, and have markedly expanded plantings of locally selected crops. The planting of orchards and vineyards is proceeding apace, while in the southern oblasts-- --Surkhan-Darya and Kashka-Darya--the sowing of feed crops is underway. In a number of places, fields are being tilled and flushed of salt residues.

"The peculiarities of this spring are such that all field operations have to be accomplished at virtually the same time, without a break in the schedule," says V. I. Pletnev, chief of the agriculture and food industry department of the Uzbekistan Communist Party Central Committee. "The success of the operation depends on the establishment of a high level of organization and control within each kolkhoz, sovkhoz, brigade and link. We are also steering the party committees toward mobilization of all collectives for a crash work program in order to buy time for each operation and to accomplish the spring planting within the optimal time-frame."

On most of the farms in Fergana Oblast, check plots have been laid out, fields have been flushed and tilling has begun. According to assurances from specialists, spring plowing under the locally existing conditions has its advantages. It provides for 100-percent germination using naturally occurring moisture, and it destroys weeds.

The demanding spring conditions have brought to light new problems as well. Many farms in the Golodnoy Steppe region require subsoil tillers, power-fitted

tractors, and the like, but such equipment is clearly in short supply here. For instance, Syr-Darya Oblast has been allocated a total of 10 Kirovets [type of tractor], whereas the existing need is for 100.

"Generally speaking, knowledge gained from working the Golodnoy Steppe has shown that it is impossible, using normal measures, to develop a practical approach to farming this land," I was told by V. A. Antonov, the first secretary of the Syr-Darya Oblast Communist Party. "What we need from the scientists are useful recommendations which might yield answers to such questions as: how to develop more effective means of desalinizing the soil, how to make better use of farm equipment, and which set of agrotechnical measures would be most advisable to employ on a continuing basis? . Incidentally, these same problems have been plaguing our neighbors in Dzhizak and Bukhara oblasts for some time. We shall continue to wait for more practical assistance from the scientific experts."

With each passing day, the pace of field work in Uzbekistan intensifies. Collectives of farms, brigades and links are in readiness to produce an excellent harvest of cotton and other crops under any conditions, and to honorably fulfill commitments made by them for the final year of the five-year plan.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SEASONAL INCIDENCE OF VARIOUS CROP PESTS, PATHOGENS PROJECTED

Tashkent SEL'SKOYE KHOZYAYSTVO UZBEKISTANA in Russian No 4, Apr 85 pp 50-51

[Article by S. Tropina of the Uzbek scientific-production association Uzsel'khoz-khimiya, and S. Zapevalova, M. Kamilova and O. Moroko of the Central Asian Scientific Research Institute for Plant Protection: "The Prognosis for the Development of Agricultural Crop Pests and Diseases"; passages rendered in all capital letters printed in boldface in source]

[Text] The spring of last year was marked by sharp declines in temperature and highly abundant precipitation. From the final ten days of March, average daily temperatures were consistently above 10 degrees [as published]. The summer was hotter than usual, with average 10-day period temperatures 3-6 degrees above the norm, which produced an unfavorable effect on the development of the harvest.

The development of crop pests was directly dependent on temperature conditions and the corresponding development of plant hosts over the course of the growing season.

Analysis of the thermal gradient for the period during which crop pests prepared for over-wintering from all reporting meteorological stations reveals close similarities to conditions for 1983.

**LATE-CROP CUTWORMS.** The entire area experienced four--and in the case of the Surkhan-Darya, Kashka-Darya and Bukhara oblasts--as many as five complete generations. The heaviest damage from late-crop cutworms occurs in late sowings and resowings of cotton (0.4-7 plants per sq. m.), and in vegetable crops (0.5-9 plants per sq.m).

The period during which this pest makes preparations for wintering-over began in the first 10 days of September, and, according to data from individual meteorological stations in Tashkent, Syr-Darya, Andizhan, Namangan and Fergana oblasts and the Kara-Kalpak ASSR, the last 10 days of August.

Favorable over-wintering conditions have been observed in all areas. Overall apparent temperatures taken during the formative period of the over-wintering pest population, and data from fall-winter excavations all indicate that the cropland acreage planned for this year should experience infestations of cutworms at the same level as 1983.

**COTTON BORER.** The development of this pest has been generally less severe: three complete generations in cotton plantings, with four in the southern zone. The fact



that the cotton developed uniformly during the budding-out period, the borer was dispersed over a wide area, and that its numbers did not exceed threshold levels in the first generation, were all contributing factors to the lower level of infestation.

Temperature increases starting in the second half of June had a negative effect on the pest's viability. This was manifested in a reduced hatching rate of the eggs (60 percent), and an increased mortality rate of the larval phase (50-90 percent). The average population density of the pest during the first and second generations did not exceed 1-29 eggs and larva per 100 counted plants.

Optimal conditions for multiplication of the pest came about in August, with the development of the third generation. The number of borer eggs in the most heavily infested areas increased to a level of up to 6-50 per 100 counted plants.

Highly favorable conditions for the pest's over-wintering preparations developed in the majority of oblasts during the last 10 days of August. Considering the biological characteristics of the cotton borer, the fact that it fed quite heavily and entered into diapause with a substantial fat reserve under conditions favoring its survival through the winter and spring periods, infestations of this pest should be expected similar to those seen in 1982.

CUTWORM MOTH. This was not seen in significant numbers during the course of the growing season. However, during fall investigations, some areas containing isolated concentrations of chrysalises and discarded wing cases were detected within the zone most frequently inhabited by the moth--the Kara-Kalpak. The airborne exodus of the last generation of moths took place under conditions of reduced temperature (below 13.5 degrees) and sparse precipitation.

In the spring, damage inflicted by the pest may show up in its favorite habitats.

SPIDER MITES. High summertime temperatures combined with excessively dry air led to intensified proliferation and distribution of this pest on large-scale cotton plantings. One hundred percent infestation accompanied by leaf drop was seen in separate plots. From 250 to 700 individual pests were counted on a single infected plant. Favorable conditions for developing a substantial over-wintering population existed in all of the pest's favorite habitats. This year's spider mite infestations are expected to be at about the same level as last year.

APHIDS. All forms of this pest multiplied at accelerated rates during spring and summer of last year. In heavily infested areas, 98-100 percent of the crop was affected, with as many as 200-600 individual vermin per plant.

Not until July, when air temperatures rose to 40-44 degrees, was a minor decline in the numbers of this pest noted.

It should be pointed out that the use of phosphororganic toxins against aphids does not provide favorable results. Despite the need for them, specific aphicides are not being received in the republic. As a result, annual aphid infestations retard the development of the cotton crop over a considerable area.

Infestations in 1985 are likely to be on a level with the two preceding years.

**WILT.** Last year, the first affected plants were found late in the second week of May.

Thanks to higher soil and air temperatures in the second half of June and the first half of August, a decline in the activity of this pathogen was observed both in the soil and in affected plants. By the onset of leaf-drop, the number of diseased plants had once again begun to increase. Large stands of cotton were hit by wilt on farms in Andizhan, Namangan, Samarkand, Surkhan-Darya, Fergana and Khorezm oblasts.

The plowing under of cotton stems and bolls, as practiced on most farms in the republic, is responsible for a build-up in the soil of the infectious pathogen which causes wilt. Consequently, the prevalence of this disease will be at a higher level this year--approximately on the same scale as in 1981-82.

With springtime precipitation at average annual levels, both fusarium and verticillium wilts will be found on medium-staple varieties of cotton. Especially hard hit will be plantings in Andizhan, Fergana, Namangan and Tashkent oblasts, as well as certain rayons in Samarkand, Khorezm, Surkhan-Darya and Kashka-Darya oblasts.

**GRASSHOPPERS.** During 1984, the destructive effects of grasshoppers, particularly the maroccan variety, were seen in Kashka-Darya, Surkhan-Darya and Samarkand oblasts.

Thanks to timely observations and the application of effective controls, the majority of this pest population was destroyed at the hatching sites. Grasshopper migrations into the primary cultivated areas were prevented. Isolated swarms of the pest, however, managed to deposit egg cases in fields which are difficult of access for spraying.

Observations made in the fall established that the over-wintering maroccan grasshopper population was smaller than in 1983. The number of egg cases varies from 1 to 76 per sq. m.. This amount is quite adequate, however, given optimal springtime conditions (approximately 100 mm of precipitation, etc.), to result in damage from grasshoppers. Most likely to be affected are Surkhan-Darya, Kashka-Darya and Samarkand oblasts, as well as parts of Tashkent, Dzhizak and Navoi oblasts.

The number of locust egg cases totaled 0.2-3 per sq. m., and from 0.1 to 50 per hectare for the Asiatic grasshopper. This is fair warning that heavy swarms of these types of Orthoptera on a level with 1983 should be expected.

**PESTS AND DISEASES OF FRUIT CROPS.** As in past years, orchards are seriously threatened by the codling moth, clothes moth and the various fruit mites; important pathogens include Clasterosporium and scab fungi.

The warm weather of August and September allowed the principle orchard pests to feed heavily, build up fat reserves, and enter the winter diapause in great numbers.

Field investigations in the fall revealed that damage done by the codling moth, hooded moth and other pests affected as much as 30-90 percent of all trees in the orchards, with from 1 to 28 insects counted per linear meter of tree trunk. These pests have the capacity for inflicting serious damage on orchards this year. In

recent years, plant diseases have assumed massive importance. Weather conditions in 1984 also turned out to be highly favorable for a build-up of infectious diseases.

PESTS AND DISEASES OF THE VINYARD. Recently, both the grape leaf roller and the vine scale have been widespread on vinyard plantings. The damage done by these pests is manifested over the course of the entire growing season, beginning in April.

The high temperatures of the summer months acted to check the development of powdery mildew. But, the lower springtime temperatures more favorable to its development will cause concentrated outbreaks of powdery mildew in 1985.

VEGETABLE CROP PESTS. One of the reservoirs of cotton borer infestation is tomato plantings, where, for all practical purposes, no measures are employed against it. The cotton borer [in this case, also known as the tomato fruit worm] develops in great numbers and inflicts its damage over three to four generations. In this area, it also over-winters.

Tomato fields will serve as an additional site of infestation of this pest.

The past 3 years, tomato plantings have suffered from white flies. Damage from this pest, as well as the area of its distribution, can be expected to increase during 1985.

In order to prevent harvest losses caused by harmful organisms, it is absolutely essential to implement a broad range of prophylactic and preparative measures, such as those developed by specialists of the Uzbek scientific-production association, Utsel'khozkhimiya, and approved by the staff of the UzSSR Ministry of Agriculture.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### COMBATTING WEEDS IN BREST OBLAST

Minsk SELSKAYA GAZETA in Russian 10 Jul 85 p 1

[Article by T. Golovnya, chief of the Administration to Protect Plant Life of the Belorussian Agricultural Chemicals Association "Belselkhozkhimiya" and V. Tatun: "Little Effort, No Organization"]

[Excerpts] Prolonged rains caused agricultural workers in the Berezovskiy Rayon additional concern in maintaining their fields planted with potatoes and sugar beets. An urgent need arose to adopt a complex system to protect plant life from weeds, disease and pests. There are sufficient supplies of herbicides and devices with which to apply them at the Berezovskiy regional agricultural chemicals association "Selkhozkhimiya." However, chemical protection work still is insufficient in the scope needed and is being done with little effort and little organization.

Special alarm is caused by the fact that the regional plant protection station's workers and its chief, Valeriy Gordenyuk, do not know how to maintain planted fields. For example, the treatment of barley against helminthosporiosis leaf blight on the farms in the rayon has been conducted in a hackneyed manner just to fulfill the plan. Instead of teaching kolkhoz and sovkhos agronomists differentiated crop maintenance which takes into account crop conditions, farm specialists here are urged to carry out massive treatments. Investigations have shown that at least 1,800 hectares of barley have been afflicted with helminthosporiosis. Aviation has treated 1,170 hectares of plants, but then has departed for another region. The time allocated has expired. We must not forget that late treatment of barley against this dangerous disease can lead to losses of 3-4 quintals of grain on every hectare.

There is special concern over protecting potatoes from phytophthora infection. The region's farms, including the farmers' own land parcels, have more than 5,000 hectares cultivated with this crop. The work volume is great. Under rainy weather conditions three-fold treatment of potatoes against phytophthora is not simple. What is needed is high operational effectiveness and chemical protection maneuvering by both the rayon agricultural chemicals association and the farms themselves. The rayon agro-chemicals association has 14 tractors with boom crop sprayers. The machinery is in working order but is used with much vacillation. On the day we visited the plantations there were only four tractors with sprayers. But even they were being used with little effort.

Frequent rains, continuous fog and dew and semi-dampened soil contribute to the spread of phytophthora. But under these extraordinary conditions the chemist's work day never ends. Even sprayers, which have been distributed to the farms, have not been used in this work.

What is abnormal is the clear lack of take-off strips in the rayon for agricultural aviation aircraft. On several farms, including the Sovkhoz "Zemledelets," the air strips have, as a rule, been plowed. Places for agricultural aircraft take-off are possible everywhere and must be selected on the elevated perennial grass fields, carefully after the hay has been removed.

We must not skip over the phenomenon of a mass of weeds remaining on roadsides of reclaimed canals and roads. And so, on the "Zemledelets" and "Berezovskiy" sovkhozes waterway maintenance crews, while mowing down grasses on the land reclamation water mains, leave behind the prickly plants intact. And to this nonsense farm specialists close their eyes, and the administrative commission of the rayon executive committee fails to respond. It is true that here and there at sessions of the agricultural soviet executive committee, crew chief accounts can be heard on progress in fulfilling the Belorussian SSR Supreme Soviet decree "On the intensification of the struggle against weeds." But the approved decisions have been well-argued and are superficial. It is not by accident that no one in the rayon, for errors in combatting weeds, has been held responsible by the administrative commission of the rayon executive committee.

Numerous facts attest to the serious lack of work by the rayon agro-chemicals association and several farm managers and specialists during periods of field maintenance. It must be said that such is the case in the Pinskiy, Kamenetskiy and other rayons in the oblast. On the whole throughout the oblast anti-phytophthora treatment has meanwhile taken place on still about 40,000 hectares of potatoes of the tasked 146,000 hectares scheduled to undergo double and triple treatment. The work pace is slow, for the most part, because the Brestskoye agro-chemicals oblast association "Selkhozkhimiya" reduced demands from regional associations and weakly controls chemical protection on the kolkhozes and sovkhozes. The situation demands immediate adoption of effective measures.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### COMBATTING WEEDS IN MOGILEV OBLAST

Minsk SELSKAYA GAZETA in Russian 5 Jul. 85 p 1

[Article by E. Verzhbitskiy: "Spread of Weeds Outpaces Countermeasures in Chausskiy Rayon"]

[Excerpts] On the day when we were in the rayon, no one was engaged in weed eradication at the Kolkhoz "Kommunist." We did not come upon any equipment in operation on the sown fields at the Kolkhoz "Yuzhnyy Kommunar." Note that the fields named are situated along roads. Roadside curbs are an excellent hotbed for weeds. But no one was scurrying to cut them down in the blooming stage. How can we combat weeds when dandelions have begun to descend upon the fields?

A majority of farms are unable to make the transition from planting to crop maintenance. Therefore, by and large, the rayon lags behind the oblast's average rate of progress. And now, essentially, it must recover from this neglect. Can the work be accelerated? This is possible. Two main thrusts will be improved organization and creation of reliable technical guarantees. This is well-understood at the regional agro-industrial association and throughout these parts.

"Much has been done to accomplish this," confirms the deputy chief of the rayon executive committee agricultural administration, A. Gorbachev. "Several days ago a meeting was held at which we heard comrades from the Kolkhoz 'Sovetskaya Belorussiya.' They compelled all managers to reexamine how work was organized and to utilize all resources. They made a special analysis of the rayon's agricultural chemicals association. Conditions were created so that each of the 16 OVT tractorized blower-sprayer units daily exceeded the work norm."

Measures are being taken. But they are still inadequate to sharply raise the pace of work and forestall the advent of weeds. Ill-equipped reserves remain. Let me cite one such example. Last year the Kolkhoz "Pobeda," in maintaining root crops, began to use rotary hoes extensively. Today its machine operator, A. Chernyakov, processes 25 sown hectares in 1.5 shifts. His device is simple. To two plowshares, somewhat smaller in diameter than corresponding grain sowers, are welded five strips from a grain combine stripper beater, to which are fastened blade sections from some harvester. This fortifies the rotary hoe from the rear of the cultivator's gabled flange. While rotating, it wrenches loose weeds on the surface.

Experience shows that supplemental manual weeding of root crops is not required. As we can see, this adaptation significantly increases efficiency on large fields planted with root crops. This practice has been widely publicized in the region. However, it is being accepted very slowly because specialists do not trust this machine.

This is the case everywhere and has led to the weeds feeling free to flourish on the fields of many farms. The necessary impediment in their path has not been set in place. This is not the first year that such a picture has been observed. And all this because no one considers how much of the harvest is "eaten up" by weeds.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### FIELD WORK AND WEATHER CONDITIONS IN ALMA-ATA OBLAST

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 16 Jul 85 p 1

[Article by D. Gutenyev]

[Excerpts] More than 100,000 hectares have been deployed for the huge grain harvest in Alma-Atinskaya Oblast. Farmers have two major concerns during these days--a curtailed harvesting period and getting 140,000 hectares ready for fall planting.

Sixty-eight integrated tractorized harvesting work detachments are doing the reaping and completing a second treatment on the land laying fallow. Tractors with stubble breakers and plows are engaged, not for the first time this season, in weed removal. Together with A. Toybayev, the manager of the Agricultural Department of the Talgarskiy Rayon Committee of the Communist Party of Kazakhstan, I drove this day through the primary granary in the rayon--the Kerbulakskiy land mass.

Combines already stood in the plowed strips for 15 minutes. They were in good repair. But the winter wheat harvesters could not be put into operation. Strong winds scattered about the fields the dehydrated spikes which were dispersed at first contact with the harvester's reeling frame. Harvesting at this time would mean a loss of up to 25 percent per hectare and a poor yield. But slowing down even for this reason might be even more painful for the grain growers. And so, on the edge of the wheat area gathered kolkhoz combine operators and trouble-shooters, a water carrier and a fueling unit and drivers attached to the Talgarskiy motor vehicle and tractor pool--everyone participating in this year's harvest at the Kolkhoz Alma-Ata.

The conversation touched upon many subjects, but principally concerned the uneasy fate of the grain growers. There were four years of drought in which seeds were barely gathered. Winter joyously brought abundant snow and the promise for a good harvest. And even though spring was long and cold, planting began two weeks later than usual, the fields, all the same, raised hopes. But last month's dry spell interrupted the ripening of the spikes to full weight. And here still harvesting cannot be done. The wind that heightened at noon for several hours put a stop to work. However, there is hope that the long-awaited will happen and the winds will abate. No one leaves the fields.

The Kolkhoz "Alma-Ata" intends to provide 2,700 tons of grain to the motherland's granaries. Grain takes up 11,300 hectares on the Kerbulakskiy land mass.

The Sovkhoz imeni Frunze is the largest grain field in the region--11,500 hectares. Here too there are two harvest-transport work detachments. The suggestion was made that one go immediately to the Chulak work area, the other to Kerbulak. But inasmuch as the approach of winter crops comes earlier than that of spring barley and was planted primarily in Chulak, almost all machinery and equipment was dispatched there. However, in addition to the wind here, the machine operators confronted another obstacle--rocks. Therefore, the combine operators drove their machines and equipment carefully, and, just as soon as they saw danger, they raised their reapers. After they have passed, waves of uncut wheat remain of the strips of land. Then helpers descend to the earth, remove the rocks and the combines pass by a second time. And this is how they try to harvest the grain, right down to the last granule.

A. Toybayev, the manager of the Agricultural Department of the Communist Party Rayon Committee says, "Due to drought, the region sorely lags behind the five-year curve for grain sales to the state. Unfortunately, we won't even this year be able to rectify the situation that has developed--both barley and winter wheat fail to provide the anticipated yield. Everything is being done on the farms especially to see that every spike is harvested and the yearly plan is fulfilled. This concern is strongly felt by everyone participating in the harvest.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### BRIEFS

**KOMRATSKIY RAYON HARVEST OPERATIONS**--The machine operators in Komratskiy Rayon are making maximum use of each good hour of time. Just as soon as the long-awaited sun appeared following prolonged rainfall, hundreds of harvesters and combines were moved out onto the fields. Over a period of two short days, their crews cut all of the peas down into wind-rows and, without losing any time, commenced threshing the crop. In all, the Komrat machine operators must harvest pulse and grain crops on more than 11,000 hectares this year. They intend to obtain an average of not less than 40 quintals of wheat and 30 quintals of peas from each hectare. /Text/ /Kishinev SOVETSKAYA MOLDAVIYA in Russian 18 Jul 85 p 1/ 7026

**GRAIN STORAGE CONDITIONS**--The republic's procurement specialists have commenced accepting the grain of the new harvest. The harvest operations, which have been complicated by rainfall, require that these specialists carry out their work on an around-the-clock basis. Despite its high moisture content, the grain is being placed in the granaries directly "from the vehicles." The grain receiving enterprises are capable of processing a considerably greater quantity of grain than is being delivered during the tense harvesting days. The slowed down temperature regime of the drying units is making it possible to retain to a maximum possible degree the nutritional qualities of the wheat and barley. The storehouses and cleaning lines, which have been placed in a state of readiness, will also have an effect on the quality of the grain storage work. The elevators have been supplied with additional quantities of equipment, transport vehicles and weighing and laboratory equipment. /by Yu. Vorob'yeva/ /Text/ /Kishinev SOVETSKAYA MOLDAVIYA in Russian 17 Jul 85 p 1/ 7026

**HIGH HARVESTING, THRESHING RATES**--According to data supplied by the CSA for the Moldavian SSR, of 434,600 hectares of grain and pulse crops (less corn) in the republic, almost 168,000 or 39 percent had been cut down by 15 July of this year. Moreover, more than one third of the mown grain has already been threshed. It bears mentioning that despite the strong and prolonged rainfall which occurred during the first half of July, rainfall which created serious difficulties with regard to the front of work to be carried out, the rates for cutting down the grain were twice as high and those for threshing -- higher by a factor of four -- than those for the same period last year. The harvesting rates for the winter wheat were even higher. Compared to last year when the winter wheat was cut down on an area of only 10,600 hectares and threshed on 500 hectares by the middle of July, the figures for this year are 67,300 and 16,000 hectares respectively. All of this testifies to the improved level of



organization for the harvesting operations, the great amount of political work being carried out on the farms by the political organizations, which are mobilizing the farmers in behalf of unconditional fulfillment of the plans and socialist obligations and the extensive competition being carried out among the agricultural workers in honor of the party's 12th congress. The grain growers in Teleneshtskiy Rayon are carrying out their harvesting operations in a highly organized manner. Seventy two percent of the winter and spring grain and pulse crops (less corn) have already been cut down in this rayon and 63 percent in both Kaushanskiy and Lazovskiy rayons. At the same time, the data supplied by the CSA indicates that the harvesting of the grain crops is still not being carried out in a rapid manner in a number of rayons. For example, only 14 percent have been cut down in Brichanskiy Rayon and only 21 percent in Dondyushanskiy and Oknitskiy Rayon. The low harvest rates in Kalarashskiy Rayon (11 percent) are unacceptable, a rayon which as is well known is located in the northern part of the republic. This also applies to Strashenskiy (16 percent) and Chernenkovskiy (18 percent) rayons. Special importance is being attached to reducing the pause which is taking place between the cutting down and threshing of the grain, which has turned out to be excessive on a number of farms. This applies primarily to the republic's northern rayons and also to such southern rayons as Bessarabskiy and Chadyr-Lungskiy where only 21 percent of the mown grain has been threshed. The party and economic organs of backward rayons must reorganize their work in an efficient manner and they must mobilize the efforts of the agricultural workers to the maximum possible degree in the interest of ensuring the timely harvesting of the crops and the prevention of grain losses. /Text/ /Kishinev SOVETSKAYA MOLDAVIYA in Russian 19 Jul 85 p 1/ 7026

INTENSIVE TECHNOLOGY FOR WINTER WHEAT--Kishinev--The use of an intensive technology in the cultivation of winter wheat is assisting the Moldavian farmers in obtaining a good grain yield. This year it is being employed on 50,000 hectares of fields. The pilots of agricultural aviation are presently carrying out a very important operation -- protecting the sowings against pests and diseases. /Text/ /Moscow TRUD in Russian 4 Jun 85 p 1/ 7026

GRAIN STORAGE QUALITY--Kishinev, 13 Jul--The procurement specialists of Moldavia have commenced accepting the grain of the new harvest. The harvest operations, which have been complicated by rainfall, require that these specialists carry out their work on an around-the-clock basis. Despite its high moisture content, the grain is being placed in the granaries directly "from the vehicles." This year the republic's grain receiving enterprises are capable of processing a considerably greater quantity of grain than is being delivered during the tense harvesting days. All of the drying units have been converted over to a slowed down temperature regime. This is making it possible to retain to a maximum possible degree the nutritional qualities of the wheat and barley. The storehouses and cleaning lines, which have been placed in a state of readiness, will also have an effect on the quality of the grain storage work. The elevators have been supplied with additional quantities of equipment, transport vehicles and weighing and laboratory equipment. The plans call for 800,000 tons of grain to be delivered to the republic's granaries. /Text/ /Moscow SELSKAYA ZHIZN in Russian 14 Jul 85 p 1/ 7026

MOTOR TRANSPORT OPERATIONS--Kishinev--The motor transport workers have joined with the republic's farmers in the campaign to harvest a large quantity of grain. Hundreds of large trucks have delivered the initial tons of the grain of the new harvest to the elevators. The use of heavy tonnage ZIL and KamAZ vehicles is

ensuring a high degree of effectiveness in the use of equipment out on the grain routes. This year the number of such vehicles at motor vehicle establishments of the republic's Minavtotrans /Ministry of Motor Transport/ has increased by almost one fourth. With the aid of an EVM /electronic computer/, individual schedules and movement routes have been developed for each motor vehicle. They take into account an entire complex of factors upon which the labor productivity of the drivers is dependent. Traveling workshops, which carry out repairs and technical servicing on the equipment, also aid in making the working time more efficient. They are equipped with welding and bench equipment and they have at their disposal the required parts and units. Overall, more than 1 million tons of select grain must be transported by the transport workers during the final year of the five-year plan. /Text/  
/Kishinev SOVETSKAYA MOLDAVIYA in Russian 18 Jul 85 p 1/ 7026

GRAIN HARVEST COMPLETED--Kishinev 3 Aug--The holiday of the last sheaf has passed on all farms in Moldavia; the harvesting of the winter grain crops has been completed. The high yields obtained on farms in Dubossarskiy, Slobodzeyskiy and Orgeyevskiy rayons was the crowning achievement of the harvest campaign. Crops cultivated for the first time using the intensive technology furnished more than 60 quintals of grain per hectare. In all, more than 200,000 tons of strong and valuable varieties of wheat grain -- twice as much as last year -- were delivered to the granaries of the homeland. The sale of high quality grain is continuing. Following a summary of the experience of leading workers, the Moldavian farmers plan to employ the intensive technology in 1986 on all 200,000 hectares of winter wheat. /Text/ /Moscow SELSKAYA ZHIZN in Russian 3 Aug 85 p 1/ 7026

GRAIN HARVEST GOALS EMPHASIZED--According to data supplied by the CSA for the Moldavian SSR, of 434,600 hectares of cereal grain and pulse crops in the republic (less corn), 331,700 hectares or 76 percent had been cut down by 22 July. Approximately 70 percent of the mown grain has already been threshed. The highest harvesting rates were achieved by the workers in Dubossarskiy Rayon. Here the mowing is nearing completion and the threshing of the grain crops is coming to a close. The farmers in Nisporenskiy Rayon are close behind (90 percent of the areas have been cut down and 95 percent of the harvested area has been threshed), in Vulkaneshtskiy Rayon the figures are 84 and 94 percent respectively and fine work is also being performed in Ungenskiy, Novoanenskiy and other rayons. The data supplied by the CSA indicates that the machine operators in Brichanskiy Rayon are performing below their potential in carrying out the harvest work. Here only slightly more than one half of the grain areas has been cut down and the amount of threshing is even less. In Oknitskiy Rayon, where there are 10,192 hectares of winter grain and pulse crops, 62 percent have been cut down and only 47 percent of the mown area threshed. The proper work tempos are lacking in Sorokskiy, Rezinskiy, Suvorovskiy, Chernenkovskiy and other rayons, where only slightly more than one half of the occupied areas of grain have been cut down and threshed. Hot sunny days are accelerating the carrying out of the 1985 harvest. However, the figures indicate that the mentioned and other rayons are not taking full advantage of the favorable weather and thus are slow in harvesting their grain crops. The party, trade union and komsomol organization must mobilize all efforts in the interest of ensuring the completion of the harvest campaign and they must organize the work in a manner such that the harvest is carried out without losses and the state is supplied with high quality grain. /Text/ /Kishinev SOVETSKAYA MOLDAVIYA in Russian 24 Jul 85 p 1/ 7026

**GRAIN SALES TO STATE--Dubossary--**The grain fields have been very generous to the farmers in Dubossarskiy Rayon. They were some of the first in the republic to fulfill their plan for selling grain to the state. All of the wheat sold came from strong or valuable varieties. The success achieved in the rayon is associated to a large degree with the introduction into field crop husbandry of the brigade contract. All of the branch's collectives are employing the intensive technology in the cultivation of winter wheat. Oriented towards achieving a high final result, they planted it following the best predecessor arrangements, thus creating a reliable base for the future harvest. In the interest of obtaining high quality grain, they selected the varieties Odesskaya-51, Obriy and Dnestrovskaya-25. In all, the rayon's grain growers intend to sell to the state more than 4,000 tons of grain from strong and valuable varieties. /by D. Dimchoglo/ [Text] /Kishinev SOVETSKAYA MOLDAVIYA in Russian 25 Jun 85 p 1/ 7026

**SUMMER GRAIN CROPS--Karshi--**Grain growers in Kashka-Darya Oblast have begun the sowing of summer grain crops. Wheat and barley seed is now being sown in the thoroughly cultivated and well fertilized soil. [Text] [Moscow TRUD in Russian 2 Mar 85 p 1] 9481

**CLEAN FALLOW APPLICATION--Dzhizak (TASS) 13 [Mar]--**Farms in Gallyaaral'skiy Rayon are relying on the use of clean fallow culture to help produce bountiful harvests from these arid piedmont lands. Tractor crews have begun the cultivation of vast tracts of land and the application of mineral fertilizers. This is the first time that clean fallow has been employed in the dry farming zone. Following recommendations from the Uzbek Grain Research Institute, farms in the rayon, which specializes in the production of wheat and barley, allocated one fifth of the arable cropland to these cereals. Scientific research has shown that crops grown on thoroughly cultivated and well fertilized fields yield three times the usual amount of grain. Clean fallow is also being implemented in other grain-growing areas of Uzbekistan, where most of the grain is grown on non-irrigated farmland. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 14 Mar 85 p 1] 9481

**WINTER GRAIN HARVESTING--Termez (TASS) 14 [May]--**The harvesting of grains began today in the south of Uzbekistan. Tractor crews from the Kyzyl-Yulduz kolkhoz in Angorskiy Rayon, Surkhan-Darya Oblast have already moved their harvesters out into the winter barley fields. The two-stage method of grain-harvesting is being used. Highly efficient and precisely coordinated operation of the harvesting equipment not only achieves high yields, but also ensures a minimum of losses in the mature harvest. Harvesters are also in the fields on a number of farms in Gagarinskiy and Dzharkurganskiy rayons. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 15 May 85 p 1] 9481

**HIGHER GRAIN HARVEST LEVELS--Termez (TASS) 25 [May]--**Farmers in Gagarinskiy Rayon, Surkhan-Darya Oblast celebrated the abundance of their harvest. An outstanding harvest of wheat and barley has grown to maturity here: the yield approaches 40 quintals of grain per hectare. Harvesting operations by the growers continue to gather speed with the passing of each day. More than 100 combines are being used in the work, and the harvesting equipment is employed in two shifts. Harvesting has been done on the first 1000 hectares, but there remains an area of 30,000 hectares yet to be harvested. This year, following recommendations of the Uzbek Grain Research Institute, oblast farmers have



instituted the fallow-cultivation alternating method of crop rotation, and have switched to new crop varieties. Plowing and sowing machinery used for second-season corn crops is now being made ready. [Text] [Msocow SEL'SKAYA ZHIZN' in Russian 26 May 85 p 1] 9481

NURSERY STOCK PLANTING--Namangan, 23 Mar--The snow cover--unusual for this locality--has been cleared from fields of the kolkhozes and sovkhoses of this oblast. Today, the horticulturists and viticulturists were at work in them. They are busy arranging the new plantings and bringing in stock from the nurseries. More than half a million seedlings of sweet and sour cherry varieties specially adapted to regional conditions are now being shipped to growers from a local sovkhos which produces orchard stock. [telephone report by V. Vasetskiy] [EXCERPT] [Moscow SEL'SKAYA ZHIZN' in Russian 24 Mar 85 p 1] 9481

WINTER GRAIN SOWING EFFICIENCY--(UzTAG)--Two farm equipment operators of the Kattakurgan sovkhos in Sovetabadskiy Rayon, Urak Kazakov and Parda Saparov, have attained levels of work speed in the sowing of winter grains which are exceptionally high. They are both exceeding daily quotas by a factor of 1.3. The secret of these growers' success is the use of the Ipatov method. They are members of a highly diversified work brigade, which derives its efficiency from the interrelated efforts of links assigned to sowing, equipment repair, and various other duties. A minimum of time is spent here in refilling the sowing equipment with wheat and barley seed; it is done quickly, and the machinery then heads directly into the field, thus eliminating frequent tractor breakdowns. The sowing of grain crops has now taken place on a massive scale on all of the grain-growing farms in the Zarafshan Valley, where one of the largest granaries in the republic is situated. [Text] [Tashkent PRAVDA VOSTOKA in Russian 21 Oct 84 p 2] 9481

MORE PRODUCTIVE TILLING METHOD--(UzTAG)--Tractor-drawn tillers are at work in the fields of the republic, now cleared of harvests of grain, vegetable, melon and other crops. Work has begun to prepare the soil for next year's harvest. The most productive farms have combined a number of operations into the autumn plowing work: these include loosening of the soil and the application of mineral fertilizers to improve soil fertility. Several farms are introducing a highly effective cultivation system developed by the Institute of Experimental Plant Biology under the UzSSR Academy of Sciences. It calls for involving the subsoil layers in the normal agrotechnical rotation scheme. Under this method, the ground is broken down to a depth of 50-60 centimeters. This has been shown by experience to improve the water-permeability of the soil and, in the final analysis, to raise the harvest levels of agricultural crops. The effectiveness of deep cultivation is backed up by experiments conducted on the Leningrad kolkhoz in Shavatskiy Rayon. Plantings of lucerne and corn in fields tilled by the new method yielded 20 percent more feed grains than usual. [Text] [Tashkent PRAVDA VOSTOKA in Russian 20 Nov 84 p 1] 9481

WIND DAMAGE AT FARISH--Yangikishlak--Gale-force winds, striking without warning from out of the Kyzylkum, raged over Farish for 10 hours non-stop. The winds, reaching 40 meters per second, brought down power line supports, tore off roofs, uprooted trees and scattered hundreds of tons of feed, which had been shipped into the area as rations for over-wintering sheep. Telephone

communications and water lines were put out of service, and many homes, administrative buildings and production facilities suffered serious damage. The entire populace of Farish has joined in efforts to deal with the aftereffects of the storm. The clean-up work is being directed by a staff headed by B. Dzhurakulovyy, the rayispolkom deputy chairman. Much has already been done. Electric power service has resumed in the rayon seat and surrounding kishlaks [villages], and telephone communication with Dzhizak has been reestablished. The grain combine, the hospital, the filling station, and other enterprises and establishments have resumed operations. An emergency team of 100 men is working to restore power transmission lines and communications lines. The rayon is not experiencing any interruption in the flow of essential supplies. The entire republic has come to the aid of the people of Farish. Several oblasts have sent their specialists here. Life in Farish is returning to normal. [by staff correspondent] [Text] [Tashkent PRAVDA VOSTOKA in Russian 14 Feb 85 p 4] 9481

SPRING PLANTING DELAYS--This year's planting is characterized by its heavy labor intensiveness and its reliance on carrying out soil-preparation operations simultaneously with the sowing of all agricultural crops. The highly demanding situation requires strong organizational control, precise coordination of all links in the planting operation line, maximal mobilization of equipment, materials and human resources, and outstanding management efficiency in resolving problems as they arise. The primary concerns right now are the operational quality and required completion time of planting work; they determine the fate of the harvest. With this in mind, the majority of kolkhozes and sovkhoses are proceeding with field work, while the number of farms concluding the spring planting campaign continues to grow each day. As in the past, the fact that plantings of lucerne and root crops for use as feeds have not been completed as of this time is giving rise to serious concern. Corn plantings are also proceeding at a slowed-down pace. In the past 5 days, farms in Namangan Oblast have planted a total of only 300 hectares to feed-type root crops, and 400 hectares to lucerne. The situations in Bukhara and Khorezm oblasts and in the Kara-Kalpak ASSR are no better. Spring will not wait. It is essential that: highly effective measures be taken to eliminate existing problem areas; round-the-clock operation of tractor crews and planting equipment be mandated, as well as skilled maintenance personnel; every working hour and every day of good weather be efficiently utilized in the fields so as to accomplish the planting of cotton and other crops in strict adherence to standards and within the optimal agrotechnical time-frame; good-quality early growth be obtained, followed by timely inter-row cultivation, in order to set the stage for high harvest levels in 1985. [Excerpts] [Tashkent PRAVDA VOSTOKA in Russian 16 Apr 85 p 1] 9481

RICE SOWING INNOVATIVE PRACTICES--Despite the cold and capricious spring weather, grain growers in this autonomous republic have begun the sowing of rice. The poor weather has impeded wide-ranging measures aimed at ensuring vigorous early growth. Techniques employed by Krasnodar growers have received broad-scale acceptance here. Immediately after the seed is sown, growers flood the fields with water. This reduces the time required for maturation of the grain by 15-20 days. Kara-Kalpak ASSR growers are also widely utilizing innovative practices which have been suggested by research scientists of

the autonomous republic. Before being sown, the seed is treated with organic substances which form a protective coating. During cold spring weather, this protects the seed from soil-borne rot diseases. Further treatment involves dipping the seed into a chlorelle solution, which increases the biological vigor of the plants. More than 90,000 hectares in the Aral Sea area is presently sown to rice. [Text] [Tashkent PRAVDA VOSTOKA in Russian 25 Apr 85 p 1] 9481

SPRING PLANTING DELAYS--Everywhere in the republic, farmers are busy with the planting of spring crops. Kolkhozes and sovkhoses in Kashka-Darya and Surkhan-Darya oblasts have finished with the planting of feed-type root crops, while those in Navoi, Syr-Darya, Surkhan-Darya, Tashkent and Fergana oblasts have finished with lucerne. Many farms have managed to get vigorous early growth of feed crops, and tractor crews have begun inter-row cultivation of the fields. At the same time, despite good weather conditions, the pace of planting operations in several oblasts remains unaccountably slow, while optimal planting periods are being allowed to slip by. In Andizhan Oblast, plan objectives for the sowing of lucerne are 62 percent completed, in Bukhara Oblast--75 percent, and Dzhizak--77 percent. Farms in Navoi, Syr-Darya and Fergana oblasts are lagging markedly behind in the sowing of vegetable crops and feed-type root crops. Corn planting is delayed on farms in Kashka-Darya, Navoi, Samarkand, Syr-Darya and Tashkent oblasts, where plan objectives have reached only an 18-50 percent completion range. The situation is even worse on farms in the Kara-Kalpak ASSR and in Khorezm Oblast. In Navoi and Namangan oblasts, optimal planting times for orchards have been allowed to pass. Concern is growing over delays in the planting of the primary crop--cotton; all oblasts have fallen significantly behind last year's pace. At the present time, there is no more important objective than conducting timely and efficient planting operations, and getting strong early growth with naturally occurring moisture. This will ensure high harvest levels for cotton and other agricultural crops. [Text] [Tashkent PRAVDA VOSTOKA in Russian 12 Apr 85 p 1] 9481

FLOODING SUBMERGES FARMS--As a result of severe flooding in extensive areas Transbaykal farms situated on the floodlands of the river Shilka have been submerged. Our Chita correspondent Rurik Karasevich recorded a conversation with the chairman of the Shilkinskiy Rayispolkom, Boris Andreyevich Lomakin. [Lomakin] At the present time 7,000 hectares of hayfields have been submerged in the Rayon as well as 9 bridges; 779 houses have been flooded, where more than 2,200 people live. More than 1,800 people were evacuated throughout the town. [Excerpts] [Moscow Domestic Service in Russian 0900 GMT 18 Aug 85 LD]

CSO: 1824/532



## LIVESTOCK FEED PROCUREMENT

### MEASURES TO IMPROVE PRODUCTIVITY OF RSFSR NATURAL FEED LANDS

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 6, Jun 85 pp 24-25

[Article by V. Agafonov, director of the Main Administration of Feed and Mixed Feed of the RSFSR Ministry of Agriculture: "Forage from Natural Lands"]

[Text] Natural forage lands are an important resource for supplementing feed supplies. In the Russian Federation today they occupy almost 40 percent of the total area of agricultural lands, and in a number of regions they even exceed the acreage of cultivated lands. In a word, there are plenty of grasslands and pastures in the republic, but significant portions of them are overgrown with brush and small trees, swampy or strewn with rocks. This is the principal reason for their low productivity.

One of the means of improving their productivity is land reclamation. Already many farms are carrying on projects directed toward improving natural feed-producing lands and raising productivity and are transforming meadows into a basic resource for the production of hay and pasture forage. During the last 10 years the acreage of improved grasslands and sown pastures has increased significantly. For example, on the farms of Leningrad, Kaliningrad, Bryansk, Moscow, Chelyabinsk and Omsk oblasts and the Mari, Mordovian, Chuvash and Buryat autonomous republics, improved grasslands account for from 27 to 45 percent. Their average yield is 20 to 30 quintals of hay per hectare.

It is known that the yield from a fertilized meadow depends to a great extent on the manner in which it is fertilized. According to the long-term data of the All-Union Fodder Scientific Research Institute, the natural productivity of a dry-valley meadow in a non-Chernozem zone does not exceed 16 quintals of hay per hectare. But with an annual application per hectare of 120 to 180 kg of active nitrogen, 30 kg of phosphorus and 60 kg of potassium, the average hay yield is 64 to 72 quintals.

So far, unfortunately, natural grasslands and pastures are receiving little fertilizer. In the last 3 years the fertilized area amounted to only 3 or 4 percent, and in some oblasts even less. In Chita and Novosibirsk oblasts and the Kalmyk ASSR, only 1 to 2 percent of the acreage of meadows is fertilized, and the application is only 60 to 100 kg of fertilizer per

hectare. Thus there is no reason to be surprised at the low productivity of the grasslands in these regions.

Just as necessary as effective measures for the care of meadows and pasture-land is liming of acid soils. A ton of lime applied when a sown stand of grass is being established produces up to an extra 12 quintals of feed units, increases the longevity of valuable grass species and raises the quality of the feed and the return of mineral fertilizers.

In places where there is a comprehensive approach to the improvement and maintenance of the land, meadows become a reliable source of inexpensive and nutritious feed and produce a high yield. In this connection the experience of Ivanovo Oblast is interesting.

Here the farms themselves have undertaken the task of improving the natural grasslands and pastures. A special program is anticipated to bring about the radical improvement and reseedling of 163,000 hectares of meadows before 1990. In difficult places the work will be done by reclamation specialists. Groups responsible for the organization and actual direction of the feed lands improvement have been formed in the oblast. The indicated measures are being carried out by specialized teams from the kolkhozes and sovkhoses or by interfarm groups with the participation of the Glavnechernozemvodstroy and Sel'khozkhimiya mobile mechanized columns.

Radical improvement of meadows includes working the sod (soil) with KPG-2,2, KPG-250, KPSH-5, or OPT-3-5 subsurface cultivators/deep tillers in two directions to a depth of up to 30 cm; breaking up the sod with rototillers or disk harrows (the number of treatments depends on the condition of the area); leveling the parcel with land levelers, cultivators, harrows or other equipment; packing the soil before and after seeding; and, finally, seeding.

It is noteworthy that the use of subsurface cultivators to work the soil under the conditions in Ivanovo Oblast proved to be fully justified. In soils having a small humus horizon -- precisely the soils characteristic of this oblast -- these machines permit preservation of the fertile layer, good breaking up of the sod and elimination of hummocks.

In work directed toward the radical improvement of natural feed lands, along with liming, special attention is devoted to application of organic and mineral fertilizers. This is attended to primarily by the Sel'khozkhimiya associations, which are guided by cartograms drawn up by the farms.

In 1983 in Ivanovo Oblast 10,500 hectares of meadowland were improved, and in 1984, 23,000. This is several times more than in 1976-1982. In 1983 the Mugreyev Sovkhoz, for example, carried out with its own resources the radical improvement of 90 hectares of meadows that were severely overgrown with shrubs. The cost of the work, including the initial cultivation, came to 300 to 350 rubles per hectare. After a year these lands began to yield 42 quintals of hay per hectare.

The improvement group of the Rastilkov Sovkhoz labored well last year. With a planned goal of 130 hectares, four machine operators under the direction of the deputy director for feed production, N. Lokalov, completed a radical improvement of 150 hectares of meadowland. In addition, 130 hectares were reseeded and 330 received superficial improvement. And altogether in recent years the farm has improved more than 500 hectares of meadows, which produce 45 quintals of hay per hectare. The productivity of the grasslands over all on the sovkhov rose from 14 quintals of hay per hectare to 20.

The experience of the Ivanovo farmers is being more and more widely applied now in other oblasts and krais in Russia. In Novosibirsk Oblast the efforts of kolkhozes, sovkhovs and Sel'khozkhimiya have improved 63,000 hectares of meadows and pastures, in Stavropol Krai, 32,000, in Tyumen Oblast, 28,000, in Orenburg Oblast, 21,000 and in Rostov Oblast, 19,000. There has been a significant increase in the scope of similar efforts in Arkhangelsk, Leningrad, Smolensk and Omsk oblasts.

The Pioneer Sovkhoz in Vladimir Oblast is working successfully on the improvement of natural feed lands. In 1983 a mechanized team led by Yu. Malyshev improved 53 hectares of meadowland and in the following year obtained 24 quintals of hay per hectare (before the improvement the yield had not exceeded 8 to 10 quintals). In 1984 the team improved another 600 hectares of meadows. Now this farm is accepted in the oblast as the model. At Pioneer, leaders, specialists and machine operators of kolkhozes and sovkhovs study the latest methods of improving natural feed lands and increasing their productivity.

Since 1981 the Tsinogorsk Sovkhoz in Arkhangelsk Oblast has been working on the rehabilitation of meadows with its own resources. During this time a group of 5 machine operators has grubbed out brush, leveled and cultivated the surface layer of the soil, applied fertilizer and sown grasses on an area of 900 hectares. In the course of 2 years the yield of hay increased by 6 quintals per hectare.

The kolkhozes, sovkhovs and Sel'khozkhimiya associations of Tyumen Oblast have achieved rather good success. In 1984 they improved 28,000 hectares of meadowland. A group from the Novotarman Sovkhoz with a goal of 150 hectares carried out work on 400, of which 100 were sown with grain crops and yielded 28.6 quintals of grain per hectare, and 300 hectares were planted with annual grasses for green feed and yielded 120 quintals of green material per hectare.

Cultivated pastures, especially those that are irrigated, are a source of inexpensive and guaranteed feeds.

Thanks to timely improvement work, systematic application of the needed amounts of fertilizers and underseeding of a mixture of meadow and pasture grasses many farms in Leningrad, Moscow, Tula and Gorkiy oblasts obtain an annual yield of 165 to 270 quintals of green material per hectare from such land. On the Matrosovo Sovkhoz in Vyborgskiy Rayon of Leningrad Oblast,

perennial pastures have been established on 600 hectares, with partial irrigation. In the summer period they permit an average daily milk yield of 13 to 14 kg per cow. On the May Sovkhoz in Vologda Oblast 1300 cows are kept on 650 hectares of sown pasture. A hectare of this land yields 290 quintals of green material, which permits a yield of 2000 kg of milk per cow during the summer months.

On the Rodina Kolkhoz in Vologodskiy Rayon of Vologda Oblast there are 1500 head of cattle on 446 hectares of irrigated sown pastures. Each hectare produces 240 to 295 quintals of green material annually. In the summer the daily milk yields hold consistently at the level of 12 to 13 kg, and the average annual milk yield exceeds 4,500 kg. The production cost of a quintal of milk is 16 to 17 rubles. Expenditures for establishing sown pastures are recovered in 4 to 6 years.

Successful cultivation of meadows and pastures depends to a great extent on the farms' supply of grass seed. For this an efficient seed production organization is important. This fact is well understood in Ivanovo Oblast, where 7 kolkhozes and 15 sovkhoses are responsible for satisfying completely the farms' need for seeds. Last year on these farms 13,800 hectares were devoted to seed plants of perennial grasses and 1200 tons of seed were collected, and this year the aim is to bring the seed production up to 1745 tons. Moreover, all the farms of the oblast will raise grass seed for their own needs. On each kolkhoz and sovkhos, brigades and detachments for seed production have been designated and seed breeding plots have been selected. It is planned to put in seed plants of perennial grasses, by wide-row planting, on an area of 5,600 hectares.

Properly planned irrigation plays a large role in the improvement of meadows and pastures. In this connection it is interesting to note the experience of a number of kolkhozes and sovkhoses in the steppe oblasts of the Volga region, the Trans-Ural region and Western Siberia, where basin irrigation is being more and more widely introduced. It makes it possible to assure a stable yield of grass, 2 or 3 times greater than the yield from unirrigated natural grasslands.

On the Novyy Byt Sovkhoz in Nikolayevskiy Rayon in Volgograd oblast, vernal pools [natural depressions that collect water in the spring and dry up in the summer] occupy an area of more than 1800 hectares. With the help of scientists from VNIIIOZ [possibly All-Union Scientific Research Institute of Irrigation of Agriculture] there has been introduced here a system that involves flooding the depression alternately with large flows and with small flows, so that the hydrogeological condition of the depression is stabilized, bog formation and secondary salinization are prevented and development of a stand of sedges is restricted.

This irrigation system in conjunction with the use of a complete mineral fertilizer ( $N_{180}P_{60}K_{60}$ ) has made it possible to raise the yield from vernal pools from 7 or 8 quintals of hay per hectare to 40 quintals. Application of fertilizers under the post-harvest grass vegetation is especially effective. At this period the nitrogen is fully assimilated by the plants.

The net profit resulting from the increased yield and the improved quality of the hay amounts to 90 to 100 rubles per hectare annually.

In the battle against undesirable weeds herbicides are used: in the autumn the aftermath is sprayed with the amino salt of 2,4-D (3 to 4 kg per hectare). When necessary the sod is treated mechanically and meadow-pasture grasses are undersown.

The October (1984) Plenum of the CPSU Central Committee set vital new tasks for workers in the field of agriculture. The 12th Five-Year Plan calls for improving 6,500,000 hectares of natural grasslands and pastures. This is more than twice as much as was done in the 11th Five-Year Plan. Now the farms are completing the development of master plans for the improvement of natural feed lands: they are selecting the meadow areas where the improvement will be accomplished with the resources of the farms themselves and also the areas where the work is to be done by contract water management organizations.

The kolkhozes, sovkhozes and Sel'khozkhimiya associations have much to do in order to raise the productivity of the grasslands and pastures. In 1986-90 an annual superficial-method improvement of more than 4,000,000 hectares is planned. On these areas alone it will be necessary to apply not less than 5,000,000 tons of active mineral fertilizers, which will make it possible to at least double the productivity of the grasslands and pastures.

In order to maintain the high productivity of the improved grasslands and pastures, reseedling of not less than 1,530,000 hectares is envisaged.

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## LIVESTOCK FEED PROCUREMENT

### EQUIPMENT SUPPLY LAG, OPERATIONAL DEFICIENCIES NOTED

Moscow PRAVDA in Russian 23 May 85 p 2

[Article by Ye. Yevgenyev under the rubric "Agriculture Review": "For the Fodder Field"]

[Text]Both sowing and harvest. Haying season has come to the meadows. The farmers are waiting for help from the machine builders.

Planting locations change rapidly in the spring. Its center has already shifted to the Urals, Siberia and the virgin expanses of Kazakhstan. According to data of the USSR Central Statistical Administration, as of 20 May spring crops at the kolkhozes and sovkhoses occupied 93.3 million hectares, including 52.5 million hectares of grain and leguminous crops (excluding corn). This is respectively 66 and 61 percent of the allotted areas. Potatoes have been planted on 1.9 million hectares, and vegetables on 1 million hectares. The planting of corn, sugar beets, rice, flax, soybeans and groats continues. Work is underway in the forage fields.

Time is transient. In the south of Uzbekistan combine operators have already begun harvesting winter barley. Haymaking is also spreading. It has begun in Moldavia, the Transcaucasian and Central Asian republics, in the Northern Caucasus and in the Volga region. Soon the green harvest will begin to move to other areas of the country.

The leading farms, let's say, of Azerbaijan, Moscow and Leningrad oblasts have almost completely repaired their forage harvesting machines, established specialized self-supporting links with pay dependent on the quantity and quality of fodder procured and have prepared capacities for storing it. But things are not like this everywhere.

By early May, 15-20 percent of the tractor mowers, hay balers, rakes and a substantial amount of forage harvesters were still awaiting repair at kolkhozes and sovkhoses. This is more than at the same time last year. The pace of restoration work in Kazakhstan and Kalinin, Kirov, Volgograd and Perm oblasts is especially low. Let us take, for example, Turkmenistan. Haymaking has been underway for about 2 weeks, but almost one-third of the haymaking

equipment is still standing idle. Here and in other republics and oblasts as well, organizational disorders and sluggishness of engineering service have had an effect. There is not much assistance from the Selkhoztekhnika, and there are irregularities in supplying the farms with spare parts. Industrial enterprises such as the Moscow Plant imeni Ukhtomskiy and the Belotserkov Agricultural Machine Building Plant are not providing timely delivery and have made it difficult to prepare the equipment.

Equipment which is fixed poorly and not on time often causes problems for the machinery operators. Last year, for example, the country's farms obtained an average of 158 tons of dehydrated feed during the season per standard drying plant, with the norm being 400 tons. In the Ukraine they prepared 113 tons of hay with one hay baler and 170 tons in Tajikistan, but 240 tons were required. Here is where there are reserves, where there are time losses and, therefore, hay crop losses.

There are reports today as well about the low equipment output. Consequently, the appropriate services of the kolkhozes and sovkhoses must increase attention to the weak sector of production and strive to increase labor productivity. The important task is linked to saving vast resources, and the machine builders cannot ignore it. In recent years they have improved the supply of equipment to the farms, which has made it possible to increase the level of mechanization of fodder procurement somewhat. At the same time, there are still many complaints to the Ministry of Machine Building for Animal Husbandry and Fodder Production (Minzhivmash) and the Ministry of Tractor and Agricultural Machine Building, for the rural demand for units is being poorly met. The Gomel Agricultural Machinery Plant (Gomselmash) is behind in production of many fodder harvesting machinery and container-trailers, and those which are delivered to the farms are of quite low quality. Now, for example, thousands of KSK-100 combines cannot go out into the meadows.

Due to the lack of enterprise of services and enterprises of the Minzhivmash (Minister K. Belyak) and the complacency and at times carelessness of individual administrators of this ministry and its subdivisions, the replacement of generations of harvesting machines and other machinery is proceeding very slowly. For example, the GP-14 rake has been produced for more than 20 years, the GVK-6.0 for 18 years, and the PK-1.6 pick-up stacker and KUF-1.8 mower for 20 years.

Perhaps the equipment has not become outdated and meets today's needs? No. Agricultural experts see it as unproductive and uneconomical. Meanwhile, the output of needed machinery is put off from one year to the next. Take, for example, the rotary agitator-rakes. You do not obtain good-quality haylage and hay without them. There has been talk about the production of such units for many years, but the machine builders are delaying assimilation of the agitators.

Farm workers sorely need an automatic system for regulating fuel consumption during preparation of grass meal. At times a tremendous amount of fuel is burned in the burners of the AVM [expansion unknown] for no purpose.

Work is slowly being done on building machines for preparing combined silage and equipment for adding preservatives to feed, especially at a stationary establishment.

Farms are also being poorly supplied with heavy-freight transport. For many years now the question has been persistently raised about the need to produce trailers with higher capacity bodies. However, things are still at a standstill.

In short, farmers look to the machine builders to produce economical, highly productive equipment for the fodder fields.

The volume of forage procurement is increasing considerably, as are the demands on its quality. Farms need help with spare parts and machines for feed procurement not only in the future, but above all now.

As a result of weather conditions, in a number of places the perennial grasses are short. It is important to harvest them for hay in a timely manner in order to obtain good second and subsequent crops. In these conditions, rayon agrarian industrial association councils are obligated to step up control in all sectors of production to see that each farm begins the haying season fully equipped, handles it in an organized manner and puts up a sufficient amount of high-quality feed. It is important to intensify attention to the construction of buildings haylage and silage and make wide use of active ventilation and other advanced methods of preparing feed.

The large-group method of harvesting grasses ensures a high work tempo. In so doing, harvest-transport equipment is concentrated in large groups. Everywhere the harvesting of grasses has begun, the self-supporting subdivisions operating on the collective contract principle show their worth well.

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## LIVESTOCK FEED PROCUREMENT

### UKRAINIAN FEED PROCUREMENT OVERVIEW

Kiev PRAVDA UKRAINY in Russian 21 Jun 85 p 1

[Article under the rubric "Agricultural Survey": "Don't Waste Time--Let's Store Plenty of Feed"]

[Text] Hay harvesting is in full swing on the republic farms. Unstable weather in recent days has slowed the pace of the green harvesting, but grasses have been cut on an area 0.7 million hectares greater than at this time last year.

According to data of the UkSSR Central Statistical Administration, as of 17 June kolchozes and sovkhoses had procured 6 million tons of coarse feed for public animal husbandry, including 2 million tons of hay and 4 million tons of haylage. They had also produced 255,000 tons of artificially dehydrated feed.

The first cutting of seed grasses and natural perennial grasses is nearing completion in Dnepropetrovsk, Voroshilovgrad, Kirovograd, Zaporozhye, Donetsk, and a number of other oblasts.

It was not possible to offset the foul weather by a high level of organization in Transcarpathian, Ivano-Frankovsk, and Chernigov oblasts where only 31 to 44 percent of the fields were harvested. Here grain-harvesting equipment was not utilized productively, and almost half of the high-production KSK-100 and Ye-281 harvesters did not take part in the harvesting at all.

The haymowing is being conducted skillfully in Vinnichina. The annual hay procurement plan has been 77 percent met here, and five rayons in the oblast have already fully provided the animal husbandry sector with highly nutritious feed. According to the principle of production flow the machine operators of the harvest-transport link on the Kolkhos imeni Lenin, Tomashpolskiy Rayon, headed by N. V. Pustovit, have organized hay procurement. The feed producers of this farm met the annual hay procurement plan with the first cutting. Four hundred tons of the mass were delivered daily to the storehouses for drying by means of active ventilation. About one ton of hay per cow was laid in by the active ventilation method on farms in Kryzhopolskiy, Tulchinskiy, Vinnitskiy, Peschanskiy, and Mogilev-Podolskiy rayons.



Despite the bad weather, the volume of hay stored up increased during the past week in Kiev, Odessa, Volyn and oblasts, and 67,000 to 97,000 tons arrived at the feed lots.

Active ventilation of damp hay is being widely applied in Vinnitsa and Chernovitsy oblasts. This technology is being introduced everywhere in Khmel'nitskiy, Voroshilovgrad, Lvov, and Volyn oblasts. The hay tested here was ascribed to the first and second classes of nutritional value.

Unfortunately the advantages of active ventilation are undervalued in Zhitomir, Donetsk, Rovno, and Kherson oblasts where ventilators and ventilation equipment stand idle and plans are being met by only 9 to 25 percent. A large part of the existing pick-up bailers are not being included in the work in Poltava, Transcarpathian, and Chernigov oblasts.

The plans for filling the storehouses with haylage have been met by more than half on the kolkhozes and sovkhoses of Chernovitsy, Lvov, Kiev, Vinnitsa, and Crimean oblasts. But there are other facts. This type of feed is being procured badly in Poltava, Kharkov, Kherson, and Kirovograd oblasts. Because of a disregard for haylage storing technology one-third of all of it examined was ascribed to the third class nutritionally or was not classified in Zhitomir, Nikolayev, Kirovograd, and Crimean oblasts.

The prolonged rains do not permit full capacity use of feed harvesting equipment in a number of cases. In such situations it makes sense to show a preference for production of artificially dehydrated feeds, primarily grass cuttings. This is being done in Lvov, Volyn, Ivano-Frankovsk, Ternopol, and Rovna oblasts. The pace of dehydrated feed procurement remains low in Kherson, Chernigov, Iaporozhnye, and Zhitomir oblasts; on the majority of farms drying equipment is standing idle and the output per unit has remained only 10 to 17 tons since the beginning of the season.

Primary concern during this intensive period must be shown for quality. However, necessary attention is not being paid to this question everywhere. There is no concern for grass meal quality in Kiev, Zhitomir, Chernovitsy, Cherkassy, and Crimean oblasts where 30 percent of the feed prepared is third class or sub-standard (neklassnyy).

The leaders and specialists of kolkhozes, sovkhoses, and agricultural agencies must take into consideration the specific conditions and find new tactical methods aimed at increasing the production and improving the quality of feed. It is an urgent necessity to complete the first cutting of seed greasses and natural perennial grasses and to harvest mature annual grasses. Simultaneously there arises a need to carry out top-dressing, liming of old crops, and irrigation of areas to the full norm. It is necessary to take all measures to see that after the annual grasses are harvested, corn, cruciferae, and other crops, which guarantee feed yield in the fall and the last fall period, are planted.

THIS SURVEY WAS PREPARED BY THE MAIN ADMINISTRATION FOR FEED PRODUCTION, PROCUREMENT, AND STORAGE OF THE UKSSR MINISTRY OF AGRICULTURE.



# LIVESTOCK FEED PROCUREMENT

## BELORUSSIAN FEED GRASS HARVEST PROGRESS REVIEWED

### Overview Notes Lag

Minsk SELSKAYA GAZETA in Russian 18 Jul 85 p 1

[Article: "Grass Meal and Hay -- for the State"]

[Text] OPERATIONAL SURVEY

In view of the good feed qualities of grass meal, many kolkhozes and sovkhoses in the republic are giving great attention to constantly increasing its production, improving its quality and fulfilling contractual obligations for sales to the state. Good examples in this regard are being set by the Rodina and Progress Kolkhozes in Grodnenskiy Rayon, the Zelvyanka in Zelvenskiy, the Vysokoborskoye feed enterprise in Krasnopol'skiy Rayon, the Ola in Zhlobinskiy, the Bor Sovkhoz in Novogrudskiy and the Strellichevo in Khoynikskiy Rayon. The well thought out organization of labor, strict observation of technological processes and conditions, a smoothly operating green conveyor to gather large amounts of grass, including legumes, effective control over work quality and brigade contracts help these and other farms to produce and supply the state mixed feed industry with only high quality grass meal.

Oblast	Grass Meal Sold to the State (as percent of plan) by 15 July	Including by Class (percent of amount procured)		
		I	II	III
Brestsk	47.8	20.8	50.	37.2
Vitebsk	34.0	15.7	44.4	39.9
Gomel	64.5	26.9	73.0	----
Grodno	46.1	43.3	36.2	20.5
Minsk	58.1	15.3	44.2	40.5
Mogilev	40.5	12.8	29.8	57.4

Kolkhozes and sovkhoses in Baranovichskiy, Brestskiy, Gomelskiy and Narovlyanskiy rayons are successfully selling grass meal. By the beginning of

July they had already 70 percent fulfilled the plans for delivering this raw material to the mixed feed industry. The plans were 55-60 percent fulfilled by farms in Nesvizhskiy, Smolevichskiy, Myadelskiy, Shchuchinskiy, Dyatlovskiy, Grodnenskiy, Novosgrudskiy, Mogilevskiy, Osipovichskiy and Krasnopol'skiy Rayons. Farms in Lelchitskiy Rayon have already fulfilled their plans and contractual obligations for grass meal sales by 111 percent.

However, managers at a number of farms and rayons have not taken measures sufficient to fulfill plans for the production and sales of vitamin meal. Its procurements are unsatisfactory for the republic as a whole. As of 15 July the state had been delivered only 74,300 tons of meal, 49.5 percent of the plan, this is 7.7 percent lower than last year's level. All oblasts are behind. Farms in Vitebsk and Mogilev oblasts are especially lagging. They have only fulfilled 34 and 40.5 percent of their sales plans.

Sales of grass meal to the state are unsatisfactory at farms in Dubrovenskiy, Postavskiy, Ushachskiy and Chashniskiy Rayons, where sales plans are only 5 to 7 percent fulfilled. There is also lagging at farms in Gantsevichskiy, Kamenetskiy, Stolinskiy, Vetkovskiy, Ivyevskiy, Smorgonskiy, Slonimskiy, Voronovskiy, Uzdenskiy, Krupskiy, Shklovskiy, Mstislavskiy and Belynichskiy rayons. Grass meal sales are below the potentials of farms in economically strong regions such as Stolbtsovskiy, Slutskiy, Molodechnenskiy Rayons.

Low quality grass meal is arriving from a number of rayons. For example, of the grass meal coming from farms in Mogilev Oblast only 12.8 percent was in Quality Class I, while in Grodno Oblast this indicator was 43.3 percent, more than 3.5 fold higher. Farms in Vitebsk and Minsk oblasts are delivering low quality grass meal. Also cause for concern is that while the quantities of meal procured are increasing, the quality is sharply declining. Over a 30 day period the percentage of top class grass meal declined from 48 to 23 percent for the republic as a whole.

The low quality of grass meal delivered to procurers is because a number of farms have not created the necessary raw material base and do not use enough legumes for this purpose. Grass intended for processing on AVM is frequently used, it lies in swaths for a long time and its quality deteriorates.

Interfarm feed laboratories have better obligations to work. They should promptly and persistently intervene in the grass meal preparation process, have a day to day influence on improving its technology and organization. This is done in Gomel Oblast, for example, where only meal in Classes I and II is delivered. The example of farms here shows that the production of grass meal can be profitable, and not a loss, as it is in a number of rayons in other oblasts. After all, compared to Class III, the sale of a ton of Class I grass meal to the state brings in an additional 70 rubles and 600 kilograms of mixed feeds. The production costs are identical.

Together with kolkhozes, sovkhoses and other partners in the agro-industrial complex, the state inspectorates for the purchase and quality of agricultural products, grain products administrations and grain receiving enterprises are

obligated to more thoroughly examine the situation on the spot in order to radically improve grass meal production, procurement and quality, reduce costs and fulfill plans for the delivery of output to the mixed feeds industry.

State procurement of hay is going poorly at a number of farms and rayons. As of 15 July farms in the republic had fulfilled sales plans by only 37 percent.

Hay procurement is especially behind in Grodno Oblast, where only 280 tons out of a 3,200 ton target have been sold. This is only 9 percent of the plan. Even under more difficult weather conditions for haying, farms in Vitebsk Oblast have fulfilled 14 percent of their sales plan, in Mogilev Oblast -- the figure is 26 percent, in Minsk -- 45 and in Gomel Oblast -- 89 percent.

This lagging in the fulfillment of contractual obligations is taking place because a number of farms and rayons have allowed tardiness and disorganization [nerazvorotlivost], and reduced the demands made upon fulfilling plans for selling hay to the state.

This situation must be rapidly corrected.

#### Analysis, First Cut

Minsk SELSKAYA GAZETA in Russian 27 Jul 85 p 2

[Article by N. Glavatskiy, chief, BSSR Ministry of Agriculture Administration for Feed Production: "Study the Lessons of the First Cut" under the rubric "Enough Feeds for Animal Farms"]

[Text] The first step of feed preparation work is complete. What are the results? For the the republic as a whole, 6.87 quintals of feed units per standard head of livestock have been prepared. More feed than last year has been prepared in Mogilev, Gomel and Minsk oblasts. However, the rates are lower in Grodno and Vitebsk oblasts.

One cannot help but be concerned about the diversity of indicators. While 376 farms in the republic obtained 8 and more quintals of feed units per standard head of livestock per hectare of first cut, 686 farms, or one out of four, obtained 5 or less. This especially applies to Kamenetskiy, Shchuchinskiy, Braslavskiy, Volozhinskiy, Polotskiy, Iv'yevskiy, Miorskiy, Brestskiy, Mogilevskiy and Klimovichskiy rayons.

The haying was completed within optimal times on those kolkhozes and sovkhoses which have a firm rule: the cut hay should lie in swaths for two days and not more. If the weather is good the swaths are repeatedly turned over and hay is dried by active ventilation units. If the weather is unsettled, on the second day the grass is gathered for haylage. If it is rainy, silage is made from it, using preservatives.

Bad weather can only cause corrections in work organization and somewhat delay its pace, but cannot serve as a justification for stopping hay preparation.

For the republic as a whole, 71 percent of the planned volume of hay has been prepared, but only a little more than half has been gathered in Pinskiy, Shchuchinskiy, Slonimskiy, Volozhinskiy and Krasnopol'skiy rayons. Many farms have still not learned how to intensively prepare hay with the help of technology. Some even improperly use GVTs rakes. The grass is not dried in swaths, but in windrows, it is turned over from time to time but the windrows are not scattered.

The haylage preparation plan is being completed in the republic. It was successfully fulfilled by kolkhozes and sovkhozes in Gantsevichskiy, Maloritskiy, Pinskiy, Tolochinskiy and Osipovichskiy rayons. There is an opposite picture in Stolinskiy, Beshenkovichskiy, Ivanovskiy, Lelchitskiy, Lidskiy, Shchuchinskiy rayons and in many rayons in Vitebsk Oblast. It is even more difficult to find serious excuses for lagging in the preparation of haylage. How can one explain cases where grass with moisture content appropriate for silage is included in the haylage report?

As is known, the use of silos is under special control. However, they are slow in filling them in Gantsevichskiy, Ivatsevichskiy, Beshenskovichskiy, Tolochinskiy, Kormyanskiy, Mogilevskiy and Bykhovskiy rayons. Here they put off filling silos until the second half of the summer, and it is rapidly coming to an end.

There should be a more serious attitude towards grass meal production and sales. In general, the republic's plan for its production is only 44 percent fulfilled, this is 50,000 tons less than last year's indicator. The plans have practically collapsed in Gantsevichskiy, Zhabinkovskiy, Braslavskiy, Dubrovenskiy, Chashnikskiy, Ushachskiy, Lioznenskiy, Postavskiy, Sennenskiy, Volkovysskiy, Iyevskiy, Smorgonskiy, Kletskiy, Belynicheskoy, Shklovskiy, Chervikovskiy, Khotimskiy, Mstislavskiy, Krichevskiy and Kostoykovichskiy rayons.

Feed quality is a painful question. As a rule it is somewhat higher this year. However, in Brestskiy Rayon a third of the hay is in Class III, and in Dubrovenskiy up to 40 percent is. There is much low quality hayage in Ivatsevichskiy, Rossonskiy, Ostrovetskiy, Goret'skiy and a number of other. The same can be said for grass meal in Lyakhovichskiy, Dubrovenskiy, Glubokskiy, Gorodokskiy, Shumilinskiy, Borisovskiy, Starodorozhskiy, Osipovichskiy and Goret'skiy rayons.

The chiefs of rayispolkom agricultural administrations and feed laboratory workers must organize the complete and objective evaluation of feed quality at all farms. It is essential to provide transportation assistance to laboratories and to enhance their prestige and role in improving feed quality.

The second cut is now under way. Above all, close attention must be given to lagging farms, which have prepared less than 5 quintals of feed units per standard head. It is also necessary to help them by using nonagricultural lands and by allocating sections of hay fields from neighboring farms. Each kolkhoz or sovkhoz should have at least 11 quintals of feed units in grass meal per each standard head of livestock. In the second stage in no case can

there be swings [raskachka] or reductions in work pressure. The cock's foot [Dactylis glomerata] after growth is now ready. Canary grass [Phalaris] and Fescue are in the shoot and even tassel emergence phase. They can and should be cut without delay.

As can be seen, there is more to do on the feed front. Specialized collectives of feed preparation workers must work under high pressure, regardless of other agricultural work. Experience shows that where feed preparation work is not done in a campaign fashion, but high pressure work is done all season, there are sufficient reserves in the winter. A good master of the land attains such a position.

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CSO: 1824/493



## LIVESTOCK FEED PROCUREMENT

### BALTIC FEED PROCUREMENT OPERATIONS REVIEWED

#### Estonian Grass Feed

Tallinn SOVETSKAYA ESTONIYA in Russian 10 Jul 85 p 1

[Excerpt] Throughout the republic 44 percent of the plan for the storage of grass feed has been met. This is 10 percent less than at this time last year.

Due to heavy downpours in the south and southeast, the republic's situation worsened. But even here, by selecting feed procurement machinery according to weather conditions, more could possibly be obtained. More than two-thirds of the necessary grass feed has been stored at the Kolkhoz "Vambola" in the Vilyandinskiy Rayon, the "Pylva" and "Layuze" kolkhozes in the Yygevaskiy Rayon and the "Adavere" model sovkhov, as well as on the "Putkaste" sovkhov and technical school in the Khiyumaa area, while, at the same time, only one-fourth or one-third of the planned amount of feed has been laid in at the Kolkhoz "Kyrgesaare" in the Khiyumaaskiy Rayon, the "Kyrgemyae" and imeni Sassyia sovkhovs and at many other farms.

The pace of feed procurement work must be stepped up with the aid of regional agricultural-industrial association specialists, especially on lagging farms. There is no sense in waiting for good weather. We must keep in mind that altogether the republic must still accumulate approximately 350,000 tons of hay, 333,000 tons of cured hay, 159,000 tons of silage and 31,000 tons of grass meal. This requires great effort not only from the farms but from management personnel as well.

#### Latvian Grass Harvest

Riga SOVETSKAYA LATVIYA in Russian 30 Jun 85 p 1

[Excerpt] In recent days the weather unexpectedly worsened in the republic. A majority of the regions had short duration rainfall, while in several others the rains were prolonged. Despite the worsening meteorological conditions, the front-rank farms not only did not reduce their heated hay-making pace, they heightened it. The basis for success is the rapid reorientation from hay procurement to the laying in of other types of feed and vice versa. The main thing is to store as much fodder as possible.

However, a published account entitled "The Varied Approach" from the Valkskiy Rayon attests that a series of farms fails to take measures to accelerate hay making and wait for better weather.

The rayon party committees, the executive committees of the rayon councils of people's deputies, the regional agro-industrial association councils must make a fundamental evaluation of the facts involved in the delays in the "green harvest" and more strictly make demands on the managers of the laggard farms. The communists must show by personal example how to breach the gap.

The dispatcher service of the Latvian Ministry of Agriculture informs that by 28 June the gains in mown grass in the republic amounted to only two percent of the plan, supplies of hay had practically remained unchanged and cured hay and preservative treated hays and grasses only increased by two percent.

On 29 June the republic's plan fulfillment was as follows: first-cut mown grasses, 49 percent; hay procurement, 23 percent; cured hay, 29 percent; artificially dehydrated feed, 27 percent; and preservative treated hays and grasses, 80 percent.

#### Lithuanian Deficiencies

Vilnius SOVETSKAYA LITVA in Russian 26 Jun 85 p 1

[Excerpt] We must decisively overcome the lagging in feed procurement. The Lithuanian Communist Party Central Committee heard information presented by the Ministry of Agriculture, the Klaypedskiy, Moletskiy, Skuodasskiy and Shalchininskiy rayon party committees on the rate of progress in feed procurement for cattle raising.

The approved decree notes that haying, harvesting of first mown grasses, the procurement of hay, cured hay, silage, grass meal and chopped straw in the above named regions is being done slowly. There is little organization in carrying out this work and farm machinery often lays idle. Party and soviet rayon managers; specialists, party, trade union and Komsomol organizations fail to use the opportunities at hand, incompetently utilize versatile machinery and poorly manage technical means and resources. The Ministry of Agriculture and organizations and enterprises of the agro-industrial complex weakened management and control over fulfilling the decisions of the party and the state concerning the production and procurement of feed for cattle raising.

Feed purchasing agents are not working an extended day everywhere. Machinery is often inoperable and is used unproductively. On a number of farms there is a wide gap between the mowing and processing of grasses. Several farm managers and specialists ignore the scientifically substantiated recommendations for the procurement of high-quality feed adopted at the republic's agricultural workers conference-seminar. The cured hay silos are filling slowly. In the Klaypedskiy and Skuodasskiy rayons only about one-half of the grass feed 1985 harvest corresponds to first-second class requirements. The opportunities available to management are insufficiently used and youth and pensioners are not being drawn to feed procurement work in sufficient numbers.

Conditions in the republic on 24 June were such that first-cut mown grasses on arable lands were less than last year's at this time. There have been fewer purchases of all types of grass feed. The grass feed procurement level is down 19 percent compared to last year for a standard head of cattle based on calculations in feed units.

A summation of the republic's condition as regards feed procurement in the above named regions has been acknowledged to be unsatisfactory. The Latvian Central Committee of the Communist Party notified the secretaries of the Klaypedskiy, Moletskiy, Skuodasskiy and Shalchininskiy rayon party committees P. Rudis, E. Blazhyavichyute, I. Zalepugu and Ch. Vysotskiy of their personal responsibility over the organization of feed procurement work and required them to take urgent measures to eliminate deficiencies in organizing the grass harvest and feed procurement. They must provide an unconditional fulfillment and overfulfillment of the outlined volumes in the procurement of hay, cured hay, silage, grass meal, chopped straw and other types of fodder.

Requirements from the Presidium of the Lithuanian Council of Ministers Commission on Agro-Industrial Problems to take decisive measures in the shortest possible time to eliminate current deficiencies were levied against the ministries of agriculture, fruit and vegetable production, land reclamation and water management; the Administration for the Fishing Industry; the Alituskiy and Kapsukskiy city committees; the rural party rayon committees; the city executive committees; the rayon executive committees; party, trade union and Komsomol organizations; and sovkhoz and kolkhoz managers and specialists.

Party, soviet and rayon agricultural organs; party organizations and farm managers have turned their attentions to the necessity of accelerating the pace of bringing in the harvest of the first harvested grasses as a decisive stage in the procurement of feed. Under unstable weather conditions it becomes necessary to manage machinery and technology more expeditiously, not allow losses, procure only quality feed and use preservatives everywhere while silaging grasses. All feed procurement work must flow uniformly and be done in the shortest time possible.

The decree requires improved care in the cultivation of feed crops, especially corn. Whenever necessary, supplemental feedings of mineral fertilizer must be made. This must be done on all farms after the hay fields have been mown and the perennial grasses harvested. In order to replenish coarse and succulent feed resources, we must establish additional concrete tasks and organize haying on roadside fields, non-agricultural arable lands, out-of-the-way places and on forested tracts. We must strictly control the rate at which these tasks are fulfilled.

Every farm must guarantee strict control over timely and precise receipting and proper storage of feed.

The Lithuanian SSR People's Control Committee has been entrusted to organize systematic checks on the progress of feed procurement on the republic's farms, to more expeditiously uncover deficiencies and their reasons. It has been charged to eliminate shortcomings and to hold those people accountable who tolerate a lack of discipline and irresponsibility.

## LIVESTOCK

### INNOVATION IN COOPERATIVE HOG RAISING DETAILED

Moscow SELSKAYA ZHIZN in Russian 7 Jul 85 p 2

[Article by I. Shurkalo, senior dispatcher, Mir Sovkhoz, Brest Oblast, and chairman of the board of the Kommunar agricultural cooperative: "The Kommunar Cooperative: Private Plot--Common Concern."]

[Text] The personnel of our Mir Sovkhoz fatten and send up to 14,000 male calves to the meat packing plant annually, and each one weighs more than half a ton. The high profits have made it possible to build a housing area on the sovkhos with urban amenities: asphalt streets, well-furnished housing, a palace of culture, shopping center, household service center and a hotel. Everything is nice, but there is just one thing that the architects left out when planning the development--there is no place to keep livestock. There is not a single barn in the village.

Nevertheless in any apartment you will be treated to lard, ham and homemade sausage. All of these products are not from the store, they are their own.

The people in the housing area have been thinking about their own farmsteads for a long time. As is prescribed for rural residents, everyone has a private plot, and there are plenty of potatoes and vegetables. The food scraps go to waste, and people have to go to the store for meat. What can be done?

A way out was suggested by the director of the state farm, A. N. Duduk--to establish a cooperative for raising hogs. And why not?

Jointly they arrived at the following notion: to transfer part of the private plot land to the cooperative for management. Usually a family with two workers in our sovkhos has a plot of 0.35 hectares. But 0.1 hectare is quite adequate to supply oneself with potatoes and vegetables. The remaining area can be transferred to a common tract of land and sown to barley. By exchanging the barley to the government for mixed feeds one can fatten little pigs. In summer one can collect green fodder and nettles from the land unsuitable for cultivation.

Other advantages were noted. Work in the cooperative will not take much time. Each member of it will spend four to five days a year, and not working days either, but days off. This means that people will not be tied to their animal sheds but even can take the whole family on vacation without the slightest worry about feeding the little pigs. Moreover, materials for barns, gas and



electric power are saved. And also there is no use trying to hide the fact that people will not feed the livestock bread, which still happens.

In a word the idea of a cooperative pleased everyone. On 5 January 1983 at the first organizational meeting they named the cooperative "Kommunar." The number of members was 196. Each family member submitted his own application, husband and wife. Why? We shall find out later. Besides employees of the sovkhos, applicants were accepted from the kindergarten, palace of culture and paramedical and midwife center who did not have private plots. Each family of two persons allotted the cooperative 0.25 hectares of land from its private plot, and single persons allotted 0.15 hectares. Each person paid an admission fee of 40 rubles. At the same meeting the charter of the cooperative was approved and a board of 14 persons, an auditing commission and a treasurer were elected. The charter was approved by the Baranovichy rayispolkom, and an account was opened at the regional branch of Gosbank. A seal, stamp and membership books were obtained.

In all 7,840 rubles in money and 25 hectares of land were collected for the "common pot." The sovkhos overhauled an old facility for 150 pigs that had been written off and was scheduled to be torn down, transported an old feed steaming plant there and rented it all to the cooperative for 125 rubles a year. An arrangement was made with the Slonimskiy hog breeding sovkhos in the neighboring Grodno Oblast to purchase pigs. They obtained enough of them so that each family of two members would receive one live boar after fattening and single workers would receive one boar for two persons. In all they obtained 120 head with an average weight of 21 kilograms and paid 5,218 rubles--2 rubles 10 kopecks for each kilogram of live weight.

For the first period up to the harvest the state farm lent the cooperative 65 tons of mixed feed on the condition that it be returned. Ye. I. Matskevich agreed to work as the pig tender along with her basic job in the sovkhos, which was also at a small hog farm that supplied the kindergarten and the dining hall with meat. Her pay was set in accordance with the sovkhos scale--9 rubles 10 kopecks for each quintal of weight gain.

One person, however, even if the cooperative farm is small, would still have a hard time. Therefore according to the charter of the cooperative each of its members is obliged to work four days a year for it. Practically every day someone from the "Kommunar" comes to assist the pig tender in accordance with the schedule. His working day there lasts five hours, just as does that of Ye. I. Matskevich. The cooperative pays its members for this labor contribution according to the wage rate for horse-drawn and manual labor of the second class--42 kopecks per hour, or 2 rubles 10 kopecks per day.

In a word, we borrowed the feeds, the people are working and the pigs are growing. The time came for the first cooperative sowing. Previously this is how it was: all the private plots were allocated in common fields of the crop rotation and the sovkhos contributed and spread organic fertilizer on them. For this the workers paid on the basis of three rubles for each 0.1 hectare. This same arrangement has been preserved now too. It was decided to plant 25 hectares in barley. The seeds were bought in the sovkhos and sown using



sovkhoz equipment. For this 410 rubles (at 16.4 rubles per hectare) were paid from the cooperative treasury. In fall 43.6 quintals of barley were threshed from each hectare. At the grain products combine in Baranovichi 109 tons of grain were traded for enriched feed. The sovkhoz was paid 88 rubles for harvesting and 142 rubles for truck transport.

The enriched feed that was borrowed was sufficient for the whole feeding cycle. After the debt had been paid off, about 40 tons of concentrates remained for the following year. By winter 115 good hogs had grown up from the 120 pigs that had been bought for our farm (three pigs died and two gilts had to be slaughtered). As was agreed, 96 head were distributed to the members of the cooperative and the rest were turned in to the meat packing plant and brought in 5,664 rubles.

Again the question arose: how to divide the hogs? The average weight per head was 160 kilograms but one boar "reached" almost to 200 kilograms and another to 150. It was agreed that each two persons (husband and wife or two individual members of the cooperative) would draw lots as to who gets what. All of the livestock were numbered but not weighed. And the commission using the scales sent everyone at the farm "his own" live boar only in accordance with the numbers that were drawn.

After the livestock was distributed the accounts were drawn up. The cost of a quintal gained by the hogs in the cooperative amounted to 92 rubles 52 kopecks, and the cost of a quintal of live weight taking into account the purchase of pigs was 108 rubles 30 kopecks or 1.08 rubles per kilogram. From this price it is not difficult to calculate the price at which one or another member of the cooperative received the products. And what contribution did he himself make? For this purpose a personal account was established for each of us. In it was recorded: the entry fee of 40 rubles, the income from the plot of land (in 1983 it turned out to be equal to 4.28 rubles for each hundredth of a hectare of land), the value of the labor input and income from the sale of surplus hogs to the government. When all these were added up it turned out that the majority still had money in their accounts. Only four persons who received the most well-fed boars by lot paid the difference into the treasury.

People were satisfied, and the composition of the cooperative was maintained basically for 1984. On March 16 they again bought 126 baby pigs. They worked for a year on the same principle and in February of this year they again distributed 92 fattened hogs. The average weight of the livestock amounted to 176 kilograms. The remainder were turned in to the meat packing plant for which 8,500 rubles were received, with a credit to the sovkhoz of almost four tons of meat for the plan in live weight. The average daily weight increase was 463 grams and the consumption of feeds per quintal of gain was 6.1 quintals of feeding units. The total expenditures amounted to 17,000 rubles. More than 4,000 rubles remained in the account, however, and about 50 tons of mixed feed in the storehouse.

In its third period the cooperative numbers 280 persons, and 161 pigs are grunting on the farm. We figure that the innovation has successfully proven itself in practice. The hog house has been expanded, using the cooperative's

own resources, and the mechanization of the preparation and dispensing of feed has been undertaken. Documentation has already been prepared on constructing a new cooperative hog house for 500 head of livestock with a feed preparation section, which we are planning to build with the sovkhos's own construction facilities, basically out of materials saved by the builders. We are thinking about acquiring cows on the basis of one for three to four families. Then we would gain the possibility of not buying milk in the store but of obtaining it in our own cooperative shop and selling the surplus to the government.

Thus the sovkhos and the government do not lose money on our Kommunar, and the people receive a great deal of benefit. We consider that a cooperative like ours makes it possible to solve many problems of rural living.

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## LIVESTOCK

### MORE EFFECTIVE INTERBRANCH OPERATIONS IN MEAT PRODUCTION

Moscow VASNAYA INDUSTRIYA SSSR in Russian No 6, Jun 85 pp 35-38

Article by I.I. Fedorus, USSR Ministry of the Meat and Dairy Industry:  
"Strengthening Economic Contacts With Kolkhozes and Sovkhozes"/

Text In order to ensure a reliable supply of meat products for the population, as called for in the Food Program, a search must be carried out for new forms of interaction among the branches included in the agroindustrial complex. A high level of specialization in the agroindustrial complex is conditioned by a conversion over from traditional contacts among its branches to the gradual creation of a single production organism.

Under conditions involving a radical reorganization of livestock husbandry and its conversion over to an industrial basis, importance is attached to improving the forms for production-economic collaboration by enterprises of the meat industry with kolkhozes and sovkhozes in the interest of increasing the production of meat, improving its quality and creating conditions for planned and stable support in the form of raw materials and for rhythmic and more efficient operation of the branch.

The past years of the 11th Five-Year Plan were characterized by new successes in the development of the country's economy. In conformity with the state plans, measures are being carried out directed towards raising the efficiency of agricultural production and all branches of the agroindustrial complex, in the interest of improving the supply of food products for the country's population. The May (1982) Plenum of the CPSU Central Committee approved the country's Food Program for the period up to 1990 and it developed measures for implementing it. Experience has shown that the new organs of branch administration of the agroindustrial complex are overcoming their departmental isolation and ensuring closer organizational and economic ties among themselves. Over the past few years, the party and government have adopted a number of important decrees directed towards developing and strengthening direct contacts among industrial and trade enterprises with kolkhozes and sovkhozes. The decree of the CPSU Central Committee and the USSR Council of Ministers on improving economic relationships between agriculture and other branches of the national economy orients the partners of agricultural enterprises towards raising responsibility for growth in the economic effectiveness of agricultural production, while ensuring interest in the final result.

The operational results of the past 2 years have shown that all of these measures are producing fruitful results. Compared to the first two years of the

current five-year plan, the overall production of agricultural products during the 1983-1984 period increased by roughly 20 billion rubles worth.

Positive changes have taken place in public livestock husbandry, which is the foundation for raw material support for the meat industry. As a result of the consistent implementation of the decisions handed down during the May (1982) Plenum of the CPSU Central Committee, the efforts of livestock husbandry workers and a strengthening of economic contacts within the APK system, notable improvements have been achieved over the past 2 years in supplying enterprises of the meat industry with the raw materials required. The plans for state purchases of livestock and poultry during this period were over-fulfilled by 676,000 tons and this made it possible to increase the production of meat products over and above the plan established for 1983-1984. The quality of the livestock being procured is constantly improving. The average live weight of a head of cattle reached 363 kilograms in 1984. Heavy-weight young stock accounted for 52 percent of the overall number of cattle procured and the average live weight of one head of such young stock -- 417 kilograms.

Contractual obligations are being carried out in a better manner as a result of improvements in organization and discipline in livestock and poultry procurements. Compared to 1982, the number of farms which did not fulfill their contractual obligations in 1984, throughout the branch as a whole, decreased by one-half. Moreover, practically all of the kolkhozes and sovkhoses in the Lithuanian SSR, Latvian SSR and Estonian SSR fulfilled their contractual obligations for the sale of livestock and poultry and in the Belorussian SSR the number of farms which did not fulfill their contracts decreased to one third. In the raw material zone for the Lipetsk Association of the meat industry (RSFSR) and the Minsk Association (BSSR), all of the farms fulfilled in a timely manner all of the obligations called for in the contractual agreements. Such examples are not singular in nature. The processing of livestock raw material by months became common practice. Whereas in 1982, for the country as a whole, the ratio of the maximum monthly (September) volume of livestock delivered for processing to the minimum (April) volume was 2.2, in 1984 it decreased to 1.67; in other words, the seasonal deliveries of livestock raw materials over the past 2 years decreased by 25 percent. At the present time, at many meat combines, including Ivano-Frankovsk (UkSSR) and Slonim (BSSR), the livestock are being delivered for processing practically uniformly throughout the year.

Improvements in the structure of the procurement organizations and a strengthening of their staff with skilled personnel have definitely improved the organization of state livestock purchases.

In 1983-1984, the livestock procurement functions in the Kirghiz SSR and Turkmen SSR and in 51 oblasts and krays of the RSFSR were turned over to the USSR Minmyasomolprom /Ministry of the Meat and Dairy Industry/. The meat industry is now procuring more than 82 percent of the livestock and poultry directly. However, up until now the livestock procurement organizations in the Uzbek SSR, Moldavian SSR, Tajik SSR and 21 oblasts in the RSFSR have been subordinate to the agricultural ministries of the union republics. Experience has shown that such a situation restrains the development of direct contacts between the meat combines on the one hand and the kolkhozes and sovkhoses on the other, in connection with livestock procurements. The acceptance of

of livestock directly on the farms is being introduced into operations only slowly. Whereas in 1984, throughout the country as a whole, 37 percent of the overall number of livestock and poultry delivered for processing were accepted directly on the farms (in the Belorussian SSR -- 73 percent, Ukrainian SSR -- 51 percent, Latvian SSR -- 52 percent and Lithuanian SSR -- 79 percent), on farm in the Tajik SSR not one ton was accepted in this manner and in the Uzbek SSR only 10 percent.

For 1985, the meat industry enterprises were assigned the task of accepting 6,343,000 tons of livestock and poultry directly on the farms, or 33 percent more than in 1984. The results for the 1st quarter of 1985 indicate that the meat industry is on the whole coping successfully with this task. A lag has developed in the Uzbek SSR and the Moldavian SSR in the planned growth in the volumes of centralized livestock and poultry shipments, that is, in those republics where the livestock procurement organizations are not subordinate to the USSR Minmyasomolprom system.

In the interest of ensuring the organized carrying out of state purchases of livestock and poultry and expanding business-like collaboration in the introduction of centralized shipments of raw materials, many meat industry enterprises, together with other APK /agroindustrial complex/ partners and under the direction of agroindustrial associations, have joined in a socialist competition for the successful carrying out of the plans for the 11th Five-Year Plan. The agroindustrial associations in Lipetsk Oblast organized a socialist competition among kolkhozes, sovkhoses, enterprises and organizations for the best work carried out in connection with converting over to accepting livestock directly on the farms. Diplomas of the oblast agroindustrial association and branch oblast committees of trade unions and monetary bonuses from the centralized fund of the oblast APO were instituted for the winners -- the collectives of farms, enterprises and RAPO's. Another example can also be cited. Many meat industry enterprises are developing a socialist competition among kolkhozes and sovkhoses based upon agreements calling for labor collaboration. The Konotop Meat Combine in Sumy Oblast has agreements which call for labor collaboration with farms in three rayons. As a result of close collaboration with kolkhozes and sovkhoses, the deliveries of livestock are organized strictly according to schedule and their timely acceptance and processing are ensured.

The business-like contacts between the organs of administration for the APK branches are becoming stronger. Minmyasomolprom for the Latvian SSR, jointly with Minzag /Ministry of Procurements/ and the republic's Minsel'khoz /Ministry of Agriculture/ are carrying out regular inspections of the livestock procurement network and on the technical status of the meat combines, for the purpose of determining the measures required for strengthening the branch's logistical base, improving procurement operations and accelerating the conversion over to centralized shipments of the livestock from the farms.

The meat branch is increasing its contribution towards creating a strong feed base for livestock husbandry. In addition to dry animal feeds, the enterprises of the meat industry are increasing the production of feed broths, plant-animal feeds, feed enrichment agents and other types of feed. The production of meat, sausage products and other items from a special type of raw material, for intra-



organizational consumption at kolkhozes and sovkhoses, is being expanded at the meat combines. The relationships established for other operational trends are also becoming stronger.

At the present time, practically all of the meat combines are included in the structure of rayon or oblast agroindustrial associations. An exception would be those individual enterprises which are located in large cities, the livestock of which are drawn from many rayons and oblasts. In connection with the inclusion of meat combines in the structure of agroindustrial associations, a need has arisen for defining more precisely the administrative structure for the meat industry and, in a number of instances, for expanding the rights of small enterprises which have the status of production units, in order to increase the role they play in the work of rayon agroindustrial associations.

A study and summary of operational experience under the new conditions reveal that with the formation of single organs for administering APK enterprises, the work of the meat combines concerned with improving contacts with the kolkhozes and sovkhoses is further activated. In their current work, the APK partners are taking into account more completely their mutual interests, their production collaboration and mutual assistance are becoming more intense and their orientation towards achieving higher final results is increasing. Problems associated with the work of the meat industry enterprises are being examined on a regular basis during meetings of many agroindustrial association councils in the krays, oblasts (ASSR's) and rayons, with appropriate decisions being handed down.

As a result of the coordinating role being played by the agroindustrial associations and the control they are exercising in many oblasts and union republics (Ukrainian SSR, Belorussian SSR, Latvian SSR, Lithuanian SSR and others), improvements have taken place in the rhythmical nature and observance of the schedules for delivering livestock for processing.

Commencing in 1983, the branch's production associations and enterprises began participating in the formation of centralized funds for the economic stimulation and development of APO /agroindustrial association/ production. In 1983, these funds amounted to 5 million rubles and in 1984 -- roughly 8 million rubles. In this regard, the practice of the agroindustrial associations allocating funds from the centralized funds for awarding material incentives to industrial workers and for production development has become more widespread in nature. For example, in 1984 the Rezekne RAPO (Latvian SSR) furnished assistance to a meat combine for modernization of the enterprise, having allocated transport vehicles, construction materials and workers for this purpose. The experience accumulated in cooperation in the use of farm and enterprise resources for solving common tasks is being employed on an extensive scale. For example, for the processing of livestock, the meat of which is used for intra-organizational purposes, small enterprises are being built with the aid of the meat industry. Thus, in accordance with documentation prepared by Kazgipromyasomolprom, the resources of rural construction organizations and the funds of kolkhozes and sovkhoses are being used to build a slaughterhouse with a capability for handling 10 tons of meat per shift in the settlement of Aksuat in Semipalatinsk Oblast. Similarly, based upon a RAPO decision, a slaughterhouse for handling 20 tons of meat per shift is under construction at Beskol Settlement in Taldy-Kurgan Oblast.

At the same time, many shortcomings are still apparent in the work being carried out by the organs of administration and enterprises of the meat industry aimed at strengthening relationships with the APK partners. Some production associations and enterprises are not displaying proper activity with regard to improving operations within the APO structure and they are making only weak use of the opportunities available for establishing closer relationships with the farms and administrative organs of agroindustrial associations, in the interest of ensuring rhythmic livestock deliveries and acceptances, improving the transporting of the animals, raising quality still further and achieving more complete use of the raw materials available for industrial processing. Purposeful work is not being carried out in all areas aimed at mobilizing efforts for combating those losses in livestock raw materials which occur during procurement and transport operations and also violations of the rules established for the delivery, acceptance and processing of livestock. Experience has shown that in the development of business-like contacts there is a large reserve for improving the work of all APK partners. Thus the leaders of enterprises and production associations of the meat industry should ideally develop and implement specific measures aimed at strengthening production relationships with the kolkhozes and sovkhoses and improving the coordination of activities by farms and enterprises in the interest of achieving high final results.

Based upon coordinated work among the partners, the chief task here consists of achieving strict fulfillment of the plan for state purchases, the contractual agreements and the calendar schedules for the delivery and acceptance of livestock and poultry by all of the farms and enterprises. When required, it will be necessary, together with the agricultural workers and the state procurement inspections, to undertake efficient measures aimed at preventing lags from developing in the carrying out of plans and contractual obligations concerned with raw material deliveries. The role played by contractual agreements must be raised, the carrying out of these agreements must be controlled in a systematic manner and the councils of rayon and oblast agroindustrial associations must be so informed. The daily organizational work associated with ensuring rhythmic deliveries of livestock and poultry for processing must be further intensified, with assistance being provided in this regard by the agroindustrial associations.

An object of constant concern must be the uncovering and inclusion in state purchases of additional raw material resources. Together with the state procurement inspectorates and agricultural administrations, it will be necessary to analyze constantly the data on the production and use of the gross livestock resources and to achieve an increase in the marketability of livestock husbandry.

More attention should be given to the problems concerned with improving the quality of the livestock and poultry being procured. The experience of many enterprises reveals that considerable results are being achieved in those areas where the meat industry workers constantly inform the leaders of kolkhozes, sovkhoses and agroindustrial associations regarding the quality of the livestock and poultry being delivered for processing. Great benefit is derived from visits to livestock farms by meat industry workers, by the furnishing of practical assistance in improving the sanitary-veterinary conditions for the

maintenance of animals during fattening, by regular participation in the carrying out of competitive inspections among the livestock breeders and by improvements in the socialist competition based upon work collaboration agreements.

One important task confronting the meat industry enterprises and their administrative organs is the need for more industrious work directed towards implementing the decisions handed down during the May (1982) Plenum of the CPSU Central Committee, with regard to completing during the 12th Five-Year Plan the conversion over to accepting the livestock and poultry directly at the kolkhozes and sovkhoses and shipping them by means of specialized motor transport vehicles. This work is still proceeding at a very slow rate in a number of areas. A requirement also exists for ensuring more efficient use of the specialized motor transport vehicles and for lowering expenditures for shipping the livestock and poultry on a centralized basis.

In order to eliminate the violations of the rules for accepting the livestock and poultry and also in accounting for their purchases, it will be necessary to study thoroughly the reasons which bring about these negative phenomena and to undertake measures aimed at eliminating them. Firm and systematic control must be established at each enterprise in order to ensure strict observance of the rules for delivery-acceptance, transporting and processing of the livestock and poultry, a correct evaluation of the quantity, quality and timely accounting with the farms for the products accepted from them.

Every attempt must be made to ensure that each worker engaged in the acceptance of livestock and poultry and in accounting for them possesses a thorough knowledge and observes in a strict manner the requirements set forth in the appropriate rules, instructions and standards and also the purchase price lists. Training must be carried out on a regular basis and the personnel recertified each year; they must be issued moral and material incentives based upon the correct maintenance of accounts with the farms.

Together with the leaders of kolkhozes, sovkhoses, APO councils, agricultural organs and state procurement inspections, every attempt must be made to prevent and eliminate in a decisive manner incidents involving the incorrect formulation of accompanying documents, incorrect determinations of the animal weights and other violations by the farms.

Ideally, more extensive use should be made of the potential of agroindustrial associations for strengthening the production-technical base of small enterprises engaged in the processing of livestock.

An important condition for raising the operational efficiency of the agroindustrial complex on the whole is that of strengthening economic relationships and achieving closer production collaboration between enterprises of the meat industry with kolkhozes and sovkhoses. The organizational work carried out by specialists and leaders of the meat industry should be subordinated to achieving this goal and more complete use should be made of the mobilizing role played by the socialist competition.

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## AGRO-ECONOMICS AND ORGANIZATION

### GOSSNAB DEPUTY CHAIRMAN ON PROPORTIONALITY IN APK DEVELOPMENT

Moscow MATERIALNO-TEKHNICHESKOYE SNABZHENIYE in Russian No 6, Jun 85 pp 3-8

[Article by A. Lyapchenkov, deputy chairman of USSR Gosnab: "Proportional and Balanced Development for the Agro-Industrial Complex"]

[Text] The March 1985 Plenum of the CPSU Central Committee once again emphasized the urgent necessity to further improve the economic mechanism and the entire system of management of the national economy. In order to more successfully and rapidly implement these tasks it is important to steadfastly carry out the planned development of the economy, to consolidate socialist property, to expand rights, to increase the independence and responsibility of enterprises and to strengthen their interest in the end results of work.

During the current five-year plan a number of extensive measures have been taken to improve operations planning of industrial and agricultural enterprises and to create conditions that will stimulate quality, highly-productive labor, initiative and enterprise and accelerate scientific-technical progress and production intensification. The economic experiment that has been extensively implemented this year directs us toward continued research concerning effective management methods that culminate in high end results.

Promising changes are taking place within agriculture. Thanks to the successful fulfillment of the USSR Food Program, significantly more agricultural products have been produced during the last 2 years than during the first 2 years of the current five-year plan. To a certain degree this is the result of large-scale changes that have taken place within the country's agro-industrial complex.

In the time that has elapsed since the May 1982 Plenum of the CPSU Central Committee, considerable work has been done in the country with regard to the proportional and balanced development of the agro-industrial complex. There has been an increase in the number of agro-industrial associations in which the production of agricultural products and their procurement, storage, processing and sale are concentrated in one pair of hands or are distributed among association participants. A system of economic indicators has been introduced which increases the interest of enterprises of the agro-industrial complex in increasing production, in improving product quality and in



introducing progressive waste-free technologies. The measures that are being taken direct us toward highly-effective management.

A certain contribution to these achievements is being made by the workers of the all-union system of material-technical supply. Together with ministry-suppliers these systems achieve the timely delivery of the established numbers of tractors, trucks, technology and equipment and building and other materials to agriculture and to enterprises which process agricultural raw materials.

Village orders are being filled successfully by the collectives of the Minsk Tractor Plant, Kherson Combine Plant imeni Petrovskiy, Rostselmash [Rostov Agricultural Machinery Association] plants, Voronezhzernomash [Voronezh Grain Machinery Association] plants and others. The machine operators of many krays and oblasts are carrying out a persistent battle for the timely and quality repair of equipment. This matter has been organized well in Lithuania, Armenia and Andizhan, Lipetsk and Pavlodar oblasts. The availability of effective technology to a large degree determines the intensity and quality of all agricultural operations.

Large energy supplies, the technical supply of agricultural production, and the timely and sometimes ahead-of-schedule delivery of the necessary material resources have enabled us to successfully complete spring sowing in a compressed period of time during the final year of the five-year plan.

Today the workers of supply-sales organizations are strengthening attention toward the delivery of production-technical products which are required first and foremost for the preparation and carrying out of harvesting and for the processing of agricultural products.

At the same time we must recognize that the delivery of materials, equipment, fuel and lubricating materials and spare parts to the consumer within the agro-industrial complex is still not being carried out to the full degree. Inconsistent suppliers who do not fill village orders on schedule and the multi-channel departmental supply systems which operate parallel to one another and which often duplicate each other have a negative effect.

Thus it is no accident that at the contemporary level of economic construction special attention is being given to the elaboration and stagewise implementation of goal-oriented comprehensive programs related to the most important socio-economic problems. Today long-term goal-oriented programs, among which the Food Program is of primary significance, are one of the basic means of comprehensively solving extensive all-union interbranch problems.

With the goal of successfully implementing the Food Program a task has been established to achieve unified planning, proportional and balanced development of the agro-industrial complex, a significant strengthening of its material-technical base and an improvement of economic ties between branches. Moreover, the planning system of the country's food complex, which until recently has been based on a coordination of branch and territorial principles, needs considerable restructuring.



The necessity to implement this task has an objective foundation. The fact is that branch planning, which is carried out by union-republic ministries and departments and by all-union and republic associations, enables us to achieve production concentration and specialization and to carry out single technical and technological policies. Territorial planning, which is carried out by union, republic, kray and oblast planning organs, provides the opportunity to coordinate the development plans of various branches of the food complex and to carry out a balanced coordination of resources within a territorial cross-section.

Practical experience confirms the expediency of supplementing these forms of planning. After all, the production and sale of the end product within the food complex is achieved by means of joint operations of a number of branches when there is a developed division of labor. In order to achieve coordinated operations we need a single program with an orientation towards achieving maximal end results.

With the composition of branch plans at all levels, beginning with enterprises and ending with ministries, quite frequently there is an elevation in the estimated need for capital investments from the state budget and for material resources supplied by other branches and there is a decrease in deliveries of products outside branch limits.

With the existing branch planning structure central planning organs cannot fully eliminate these shortcomings. This is why the necessity arises for a comprehensive approach to solving economic, organizational, technical, social and other problems.

It also becomes apparent that an increase in production of agricultural products is most closely accompanied by growth in investments not only into agriculture but also into other branches which produce goods having a production-technical purpose and utilized in the village. All of this insistently requires a coordination of branch and territorial principles of planning and management.

Consequently, in addition to branch and territorial plans it is essential to compose comprehensive goal-oriented plans which unify and coordinate the work of branches which participate in the fulfillment of specific social-economic goals of economic development. These plans must also include specific measures for eliminating departmental barriers and regionalism and for achieving maximal end national-economic results.

Significant qualitative changes occurring in all spheres of the agro-industrial complex could evidently be multiplied in a shorter period of time, but individual shortcomings and in particular the organization of material-technical supply interfere with this.

Let me provide a specific example. The Kuban Agro-Industrial Combine, organized in Timashevskiy Rayon of Krasnodar Kray, has experimentally made a transition to cost-accounting and a self-support status. The combine consists of all the kolkhozes and sovkhoses in the rayon, interfarm enterprises and enterprises of consumer cooperatives, organizations that service agricultural

production, plants that process agricultural products and raw materials, village building and transport organizations, and specialized state trading enterprises which sell fruit and vegetable, meat and dairy products and other food items.

In utilizing property secured in its operations administration or by means of profits, the combine implements production-economic operations in accordance with a plan of economic and social development, fulfills the obligations placed on it, bears responsibilities and rights related to these operations, has an independent balance and is a legal party. The activity of the combine is built on the basis of adhering to the interests of the national economy and of the enterprises and organizations within it, with the proper coordination of centralized planned management and economic independence and initiative of the combine and its enterprises and organizations.

With the goal of increasing the effectiveness of production, processing and sale of agricultural products the combine is carrying out a single technical policy. Based on economic expediency, it can centralize either fully or partially the fulfillment of individual production-economic and other functions with the agreement of its enterprises and organizations. For example, this includes functions such as fattening cattle, producing mixed feeds, organizing breeding work, processing and selling ready products and implementing material-technical supply and capital building. Moreover, the enterprises which are assigned the centralized fulfillment of functions bear a liability as to property for the non-fulfillment or unsuitable fulfillment of obligations, as foreseen by existing law or contractual agreements.

The combine has been given the right to independently create production, procurement, trade, planning, building, transportation and other enterprises and organizations and scientific subdivisions essential for normal functioning as well as the right to reorganize or eliminate these.

The highest administrative organ of the combine is the council. Its chairman is the general director, who is appointed by the RSFSR Council of Ministers. There is a financial-accounting center for carrying out operations between enterprises and organizations which belong to the combine as well as with supply, procurement, processing, trade and other enterprises and USSR Gosbank.

The sale of agricultural and industrial products to all-union and republic funds according to established plans is carried out in accordance with existing state prices, and by means of the combine's own trade network or market and to other consumers--according to prices confirmed by the combine council. Here production quality, expenses related to packing and packaging and consumer demand must be taken into account. Thus, prices include certain additions that allow the combine to make up for expenses that arise unavoidably during the production, storage, processing and shipment of products and to accrue savings for the purpose of expanding production.

Independence as regards cadres distribution, a proportional relationship between growth in labor productivity and wages, an economic and efficient use of wage funds and material incentives orient workers toward achieving high results. Centralized funds enable the combine to solve both production and

social-everyday problems systematically, in a coordinated manner and with good quality.

With the organization of such a large production-economic complex there lawfully arose the necessity for a different approach to the planning and sale of material resources. For this reason a decision was made about singling out all products in the products list of the national economic plan and USSR Gosplan through the RSFSR Ministry of Agriculture as a separate entry. A separate entry also exists for products in the products list of USSR Gosplan, ministries and departments. The supply of material resources, with the exception of food raw materials, fuel and lubricating materials, mineral fertilizers, the means for protecting plants and spare parts for tractors, cars and agricultural machines, has been assigned to USSR Gosplan.

The implementation of this new, important and responsible matter has been assigned to the Northern Caucasus Main Territorial Administration. In order to dependably supply material resources to Kuban Agro-Industrial Combine, a general administration for product supplies--Kubanagrosnab [Kuban Agricultural Supply Administration]--has been organized within Krasnodarsnabyt [Krasnodar Supply and Sale Association]. Moreover, in terms of location it is as close as possible to the consumer and is located in the city of Timashevsk. The agro-industrial combine provides storage and work facilities on a rental basis.

Selected as the main supply form is the most progressive form--wholesale trade, which allows for the distribution and sale of material resources from the USSR nomenclature according to the orders of consumers who belong to Kuban Combine without funds or limits while adhering to plan order. For some types of products involving the national economic plan and USSR Gosplan, supply is implemented according to the order of wholesale trade but with a consideration of allocated funds. Wholesale trade of products within the USSR Gosplan products list is implemented by means of long-term agreements with supply-sales organizations without the preliminary presentation of orders.

The long-term contracts concluded by Kubanagrosnab coordinate all conditions of material-technical supply, including the sorting of products, their preparation for production use, the rolling of equipment, apparatuses and other technical resources, centralized delivery of freight and the fulfillment of information-negotiation and other services.

The primary significance of making a transition to wholesale trade in supplying Kuban Combine has to do with the fact that there is an improvement in the pace of supply of all types of products, that undesirable interruptions are eliminated and that a certain degree of stability is achieved in satisfying demand as it develops. In the final analysis, the timely and quality fulfillment of assignments, the efficient utilization of material resources and extensive maneuvering with these resources depend on this.

There has been a considerable simplification of the order for determining need and for allocating and selling material-technical resources. The

local administration of Kubanagrosnab determines the general need of the agrocombine for the essential production-technical products within the USSR Gosnabproducts list and submits its request through the North Caucasus Main Territorial Administration to the corresponding supply administrations of USSR Gosnab and soyuzglavsnabsbyt [union main administration for supply and sales]. These in turn allocate, with a separate entry for Kuban Agricultural Combine, the necessary products to the territorial organ in a volume that will allow for the well-paced work of kolkhozes, sovkhozes, processing enterprises and building and other organizations. If necessary, reserves are replenished. For this corresponding orders are made in soyuzglavsnabsbyt. As for products related to the national economic plan and USSR Gosplan, they are sold by Kubanagrosnab only according to allocated limits.

Any consumer belonging to Kuban Combine has the right to acquire any products from the products list of USSR Gosnab from the general administration of Kubanagrosnab in the course of the year. According to the desire of the consumer these products are delivered in a centralized manner using the transportation vehicles of our supply organization for a certain fee. The consumer may also utilize his own transportation. In other words, the consumer has the right to make his own choice depending on existing circumstances.

Tractors, automobiles and agricultural equipment are delivered to Kuban Agricultural Combine by industrial enterprises utilizing transit according to USSR Gosnab orders. This is what the rayon's kolkhozes and sovkhozes decided. Previously this equipment was first received by the enterprises of Goskomselkhoztekhnika [State Committee of the Agricultural Equipment Association], which then delivered it directly to the enterprise while levying a price supplement of 13.5 percent to the cost of the tractor or machine. Additional payments were exacted for assembly and adjustment of equipment. Now the kolkhozes and sovkhozes of Timashevskiy Rayon have taken these functions upon themselves, feeling that they have at their disposal a sufficient technical base and sufficient cadres for assembling and adjusting a plow or sowing machine, for example.

An important detail is the fact that numerous enterprises and organizations belonging to the combine deal primarily with only one administration, located in the city of Timashevsk, when they have a problem related to obtaining material resources. The curtailment of channels regarding delivery of resources increases the responsibility of supply organizations for the quality and pace of deliveries. When delivery schedules are violated, Kubanagrosnab pays a penalty as determined in existing law.

The initial experience of Kuban Agro-Industrial Combine confirmed the effectiveness of having enterprises of USSR Gosnab provide supplies. There is an increase in the maneuverability of utilizing resources, the consumer's storehouse reserves decrease and conditions are created for the timely acquisition of the necessary products.

Unfortunately, there are some shortcomings in this area. It is not possible to immediately change the psychology of consumers who strive to acquire materials and equipment "just in case" they may need them. But it should be



emphasized that the system of wholesale trade itself, which is more flexible and "sensitive" to the needs of the consumer, will allow us to finally overcome even this considerable shortcoming.

There have been certain difficulties at the stage of planning and determining the forms in which supplies would be provided to Kuban Agro-Industrial Combine, with its broad production network and fairly varied products list of resources used. Thus, almost all products earmarked for production-technical purposes are delivered to Kuban Combine by enterprises of USSR Gossnab. But spare parts for tractors, automobiles and agricultural machinery are received from the enterprises of Goskomselkhoztekhnika because the volume of parts delivered is smaller than the transit norms for shipment. But beginning in 1986 it is planned to supply the combine with spare parts through the administration of Kubanagrosnab.

Or here is another example. Some specific types of products within the products list of the national economic plan and USSR Gosplan were previously allocated to USSR Minmyasomolprom [Ministry of the Meat and Dairy Industry], USSR Minpishcheprom [Ministry of the Food Industry] and USSR Minrybkhkh [Ministry of the Fish Industry]. Then these products were distributed to republic ministries and further to enterprises. Now these types of products are allocated directly to processing enterprises of Kuban Agro-Industrial Combine through the RSFSR Ministry of Agriculture, which did not deal with such products previously.

With the goal of concentrating the material resources within the products list of the national economy plan and USSR Gosplan in a single pair of hands--USSR Gossnab--Kuban Agro-Industrial Combine has been included among the ministries and departments receiving products according to the article, "Other Consumers." This means that USSR Gossnab will be the main holder of capital for Kuban Agro-Industrial Combine as regards products within the products list of the national economic plan and USSR Gosplan.

On the whole, the experiment on supplying Kuban Combine with resources attests to the expediency of simplifying the supply system and of eliminating organizations that parallel and duplicate each other. Our goal is to utilize everything positive in practical terms.

Right now the Kubanagrosnab administration is the only subdivision of USSR Gossnab in the country that was formed in the rayon center according to the territorial principle. But its work experience attests to the necessity of creating a single state system of material-technical supply according to this principle. This supply system must have the capability of supplying resources to all branches of the national economy, including the agro-industrial complex, with quality and on a high organizational level.

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AGRO-ECONOMICS AND ORGANIZATION

NIKONOV DISCUSSES APK MANAGEMENT PROBLEMS IN RSFSR

Omsk ZEMLYA SIBIRSKYAYA DAL'NEVOSTOCHNAYA in Russian No 4, Apr 85 pp 2-4

[Article by V. P. Nikonov, RSFSR minister of agriculture: "Increase the Level of Leadership"]

[Text] In a historical sense, the two decades after the March (1965) CPSU Central Committee Plenum, which laid the basis for the party's contemporary agrarian policy, is not a long time. However, during this time much has been done to develop agriculture. Some figures for our republic are quite convincing evidence of this.

During this period fixed productive capital has increased 4.3 fold, there have been marked improvements in the equipment available to kolkhozes and sovkhoses and the power available has increased 3.7 fold. The deliveries of fertilizers to kolkhozes and sovkhoses increased by almost 10 million tons of active ingredients. During this time work on the improvement of alkaline and acidic soils has increased 3 and 5 fold respectively. The total area of drained and irrigated land has tripled, reaching 10 million hectares.

A large amount of work has been done to restructure the republic's countryside. Taking individual homes into account, in 12 years rural workers have received more than 160,000 million square meters of housing and schools and preschool institutions for 8 million students.

The changes in the countryside were especially marked after the May (1982) CPSU Central Committee Plenum. Compared to 1981-1982, over a 2 year period agriculture's average annual gross output increased 11 percent. There were considerable increases in the production of meat, milk, eggs, sugar beets, potatoes, vegetables, and other products. For the second year in a row the republic is fulfilling and overfulfilling the plans for the sales of the main types of animal products to the state. Above plan sales totaled 250,000 tons of meat, 2.6 million tons of milk, 3.8 billion eggs and 2,300 tons of wool.

There has been a marked strengthening of kolkhoz and sovkhos economies. All this indicates that there have been definite positive tendencies in the development of agriculture and in the social restructuring of the countryside. This should be expanded in every way possible.

This is now especially important. The plans for the current year and the forthcoming five-year plan are taut. It is sufficient to note that even in the current year the republic's gross agricultural output should increase by 7 percent above this year's level. It is intended to increase labor productivity by 14 percent.

These are not simple tasks, but the resources directed to their solution by the state are also quite powerful. This year more capital investments were allocated to the development of the agro-industrial complex than were foreseen by the five-year plan.

The task now is to see that all resources are used efficiently, with maximum utility. This requires considerable improvements in the level of economic work in the countryside, the active introduction of collective contracts and their foundations, cost accounting, at all sections of agricultural production.

In the past two years there have been definite positive changes in animal raising. Compared to the first 2 years of the five-year plan, milk and meat production has increased by 13 percent and productivity per cow has risen by 163 kilograms. Certain other indicators have also improved.

All the same, we cannot be content with what we have attained. Take just the meat purchase situation. Its growth rates are insufficient for the republic as a whole, while in some oblasts and autonomous republics sales volumes of this product have even declined compared to the 10th Five-Year Plan: in Maritime Kray by 6 percent, in Amur Oblast by 5 percent, and in the Udmurt ASSR by 2 percent. Two negative tendencies are quite obvious here.

In a number of places, instead of increasing meat production at kolkhozes and sovkhoses, things have gone the other way. Plans for sales to the state are, to a considerable extent, fulfilled by purchases from the population.

In many oblasts meat production is increasing mainly through new pig complexes and poultry factories, that is, through state feeds. At the same time, there are declines in meat production using farms' own feeds. This practice cannot be tolerated. We should not take this route in solving the tasks of the Food Program.

There are also serious shortcomings with regard to increases in milk production. During 1981-1984 many oblasts, above all, Perm, Novosibirsk and Omsk, not only failed to fulfill milk purchase plans, but but even allowed sizable declines in this product's average annual purchase volumes compared to the 10th Five-Year Plan .

There are several reasons for this: shortages and low quality of feeds, the high calving rate for cows, the low levels of zootechnical and breeding work, and unsatisfactory conditions for animals.

While in previous years we increased the production of animal products mainly through increases in the size of the herd, that is through extensive factors, today first priority is given to intensive factors in the sector's development.

This means that our efforts must now be directed primarily towards increasing livestock productivity through strengthening the feed base, improvements in breeding and veterinary work, the universal conversion of animal farms to cost accounting and progressive forms of organizing and paying labor according to final results. It is this path which will assure steady increases in production and simultaneous reductions in outlays per unit of output.

In the past three years improvements in the level of comprehensive mechanization have increased the work load per basic worker in animal raising by 15 percent, and, in spite of increases in the number of livestock and poultry, saved the labor of almost 150,000 average year around workers and reduced the number of milkers in the republic by 60,000.

Kolkhozes and sovkhoses in Tomsk, Chelyabinsk and Kemerovo oblasts and in Krasnoyarsk Kray have achieved good indicators in the mechanization of animal farms. Through the establishment of good working ties with enterprises in Goskomsel'khoztekhnika and water resource organizations, and active work in the reconstruction of animal facilities, the level of comprehensive mechanization in these oblasts is increasing 8-9 percent annually. This, in its turn, assists in considerably reducing the shortage of labor power and in increasing labor productivity.

There is one major shortcoming here: at a whole series of kolkhozes and sovkhoses increases in the mechanization level are not accompanied by reexamination of the norms for work load per animal raiser. This has an extremely negative effect upon the sector's economy and leads to large labor outlays and high production costs.

For example, while sovkhoses in Tomsk Oblast require about 6 person hours per quintal of milk, in Chita Oblast and the Buryat ASSR, the figure is more than 11, and in the Tuva and Yakut ASSR's over 13 person hours, while the average for the RSFSR is 7.4.

In increasing the efficiency of the animal raising sector much depends upon our work to reduce production costs. Today one can give a whole series of examples of quite successful work in this direction. In recent years there have been marked reductions in production costs in animal raising in Novosibirsk Oblast and Altay Kray, where each quintal of milk costs less than 31 rubles and each quintal of beef -- 200-300 rubles.

Many managers and specialists at lagging farms still do not thoroughly analyze economic conditions, do not search for the reasons for increases in production outlays and ways of reducing them, clearly underestimate intrafarm accounting, poorly utilize internal reserves and continue to be oriented towards state help and bank credits.

M. S. Gorbachev, general secretary of the CPSU Central Committee, noted in his report to the All-Union Economic Conference on Problems in the Agro-Industrial Complex: "An analysis of the situation in the agrarian sector of the economy shows that far from all management cadre have mastered economic methods of operation. Some workers have an insufficient mastery of categories such as price, production costs, profit, profitability, and output-capital ratios. Far from everyone entrusted with the task can provide a qualified analysis and proper economic evaluation of activities at a kolkhoz, sovkhos, processing or procurement enterprise.

This is shown by economic indicators at many kolkhozes and sovkhos in Novosibirsk, Kurgan, and Orenburg oblasts, Altay and Maritime krais in which wages are growing considerable faster than labor productivity.

It should be vividly clear to us, that now, when the procedure for granting credits has become stricter and financial discipline has been increased considerably, it is necessary, in order to successfully conduct operations and solve social problems, to learn how to farm intelligently and thriftily so that outlays are based upon income from product sales. In other words, expanded reproduction should be supported through farms' own means, the more economical and rational use of resources, reductions in outlays and the struggle against loss and waste.

Among the main tools for solving this problem are the most rapid introduction of collective contracts and intrafarm accounting at kolkhozes and sovkhos, the introduction of progressive forms of organizing and paying labor. In the present economic situation, making the organization and payment of labor directly dependent upon final results is the most important and urgent organizational-economic and educational task.

As a rule, given equal conditions, units working on collective contract, obtain 25-30 percent more output, their labor productivity is 20-25 percent higher and production costs 8-10 percent lower than ordinary units.

As practice shows, the greatest effect from brigade contracts are obtained only when they are introduced on the basis of cost accounting, labor is paid for final results and a coefficient of labor participation is used.

There is an obvious need to widely introduce collective contracts in agricultural production, and especially in animal raising. In recent years farms have become larger, the level of specialization has increased, and almost everywhere livestock is kept in major facilities at which labor intensive processes are mechanized.

These changes have created a new situation in animal raising. There has been a thorough division of labor. Now many animal farms have workers in 15-18 and more professions, where two decades ago there were only 3-4. There has been a sizable reduction in the number of workers in the main professions. The division of labor is such that no single profession is responsible for final production efficiency. It depends upon the efforts and interests of the entire collective.



In short, life itself has spoken out for collective contracts. In order to give the needed effect, an obligatory condition should be the introduction of cost accounting, not simplified accounting as we see at the majority of farms, where targets are set for production and rates per unit of output and accounts are kept only for these indicators. This is not sufficient. Genuine cost accounting must set limits for all outlays and have good accounting and control.

Experiences at many farms speak convincingly that with cost accounting the most effective system of control is a system of checking accounts. The essence of this is that each cost accounting unit is given limit check books for wages, feed and other outlays. Using these books, the unit chooses wages, feed and other resources, paying for them with checks. With such a system it is possible at any time to see what has been spent and how much remains. One can exercise direct control here and each worker firmly knows that there will be additional rewards for resources and that they have a direct interest in thrift and economy.

The introduction of collective contracts requires that management personnel at agricultural organs, kolkhozes and sovkhozes more thoughtfully plan and economically analyze operations, improve the overall standards of production management and organization, strictly observe technological discipline, strengthen and considerably improve the work of economic services.

At many farms where collective contracts are thought to have been introduced, this work is still superficial and formal. Without a check system there is no true cost accounting and without the latter, no collective contracts.

It is unfortunate that in contract collectives there is a wasteful attitude towards wages funds. Many members of such collectives, and sometimes the managers, do not know and are not interested in how much money is spent for wages, how it is spent according to last month's results, or how much is spent on workers who have been brought in.

A number of farms underestimate the coefficient of labor participation, used to calculate individual capabilities and attitudes towards labor and the discipline of each member of a contract unit. The equal distribution of additional wages and bonuses for output, without taking into account the coefficient of a worker's labor participation in the final results, reduces the role and significance of the collective contract as a progressive form of labor organization.

In a number of rayons there is still weak explanatory work on the advantages of the collective contract and its widespread use. There are still cases of untimely conclusion of labor agreements with brigades and links, and the assignment of their production targets. In determining pay rates for output, many farms increase or reduce production norms, leading to unjustifiably high, or, on the other hand, low earnings, which do not correspond to the labor involved.



It must also be mentioned that agricultural organs still do not sufficiently apply measures for material incentives to farm managers, specialists and contract collective workers for the more effective work of unregulated brigades.

In the interests of the matter, all these shortcomings should be eliminated as soon as possible. The state has created favorable prerequisites for the more extensive introduction of brigade contracts.

This important task gives rise to the question: why, at many kolkhozes and sovkhoses, has not intrafarm accounting, as a method for the planned operation of farms, still not become the spring which would move their entire economic mechanism for strengthening their economy? As is known, in spite of the measures to strengthen farms' worked out by the May (1982) CPSU Plenum, 22 percent of our kolkhozes and sovkhoses are still operating at a loss. In some of them the levels of production organization are so low and production costs so high, that even increased purchase prices and the 75 percent markup on them do not make these farms profitable.

Of course, it is not simple to completely solve this problem. Losing farms, as a rule, do not have reliable roads to rayon centers. Their capital-labor and energy-ratios are two and sometimes three fold lower, they have acute shortages of housing and key personnel and have not solved many other questions. But they must solve them.

The economies of weak kolkhozes and sovkhoses must be supplied with the essential material-technical resources and qualified personnel. There must also be active production, housing, cultural-service and road construction here. This must be done in actuality, not just on paper.

The republic's agro-industrial complex now has everything necessary to give effective help to losing farms and to assure their stable, systematic development. This includes the introduction of cost accounting methods for operating farms, the extensive use of progressive forms for the organization and payment of labor.

Work must be conducted so that this year becomes a guideline one for the planned introduction of collective contracts. At the beginning of the 12th Five-Year Plan this progressive form of labor organization and stimulation should be solidly part of kolkhoz and sovkhos production practice in our republic.

At the center of our attention should be questions in the further development of feed production, improvements in soil fertility, the retention of key personnel, the social development of the countryside and preparations for the forthcoming spring planting.

The extent to which these questions are being answered can be judged from the level and maturity of key personnel in agriculture in Siberia and the Far East, their ability to overcome difficulties and success in handling the tasks presented them. This must be fully acknowledged.

I want to express my firm conviction that managers, specialists and labor collectives at kolkhozes and sovkhoses and other enterprises in the agro-industrial complex throughout this vast region will multiply their efforts and do everything necessary to implement the decisions of the 26th CPSU Congress, subsequent CPSU Central Committee plena and the Food Program and will honorable meet the 27th CPSU Congress.

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## AGRO-ECONOMICS AND ORGANIZATION

### OFFICIALS OFFER RECOMMENDATIONS FOR STRENGTHENING APK

Moscow PRAVDA in Russian 12 Jul 85 p 2

[Article: "Along the Path of Integration" under the rubric "Accelerate Scientific and Technical Progress: Agro-Industrial Managers Talk"]

[Text] The country's agro-industrial complex is being strengthened and its management improved. However, there is still much to do to improve its efficiency, to see that there is smooth interaction between all its elements and that capital investments have higher returns. How can this be done more successfully? Today agro-industrial managers at republics, oblasts and rayons answer the following questions from PRAVDA:

1. An agro-industrial complex is to be managed as a single whole. What must be done to systematically solve this problem?
2. What are the ways for accelerating scientific and technical progress in the agro-industrial complex, above all, in agricultural production?
3. How can increased production efficiency and the solution to social problems in the countryside be organically combined?

### THE ADVANTAGES ARE OBVIOUS

G. Mgeladze, chairman, State Committee for Agricultural Production, Georgian SSR

1. As is known, our committee is based on the republic Ministry of Agriculture, Ministry of Land Reclamation and Water Resources and Goskomselkhoztekhnika. Experience and results from two years of its operation permit one to assert that this has been an important step in the improvement of managing, planning and financing the agro-industrial complex. I want to note that having made one department out of three, we have not abolished their former basic functions. Both the technical and reclamation services are operating. Moreover, requirements made upon them have grown, even though the

management apparatus has been reduced by about 20 percent. The main advantage of integration is that interdepartmental problems have become intrasectoral ones. They are tremendously easier to solve. Material-technical resources, capital investments and the planning and financing of the APK are now in the same hands.

What has prevented the RAPO from becoming the complete master? One of the reasons is that restructuring has not been taken to its logical conclusion. The management chain is broken. Many enterprises retained their departmental subordination and were above all concerned about solving their own problems, which often did not coincide with the interests of agricultural production. There were clearly not enough real economic tools to influence RAPO partners.

These problems have to a considerable extent been solved with the creation of the state committee. Incidentally, it is not so much the committee as it is the new model RAPO. It is radically different from those in other republics. Departmental barriers have been eliminated in the RAPO, just as in the agro-industrial association. All resources and allocative functions are in the same hands.

Strictly speaking, however, the committee does not manage an agro-industrial, but only an agro complex. After all, many partners (processors, procurers, etc.) maintain their independence. They have their plans, resources, and special interests in attaining departmental final results rather than general ones. There is a vital need to expand the scales of integration.

Dwelling upon my own experience, I will give some suggestions on the management structure of the country's APK. This should be a single organ. Perhaps not all departments can be combined right away, but by stages. In any case, such an organ must become the sole master of all material-technical resources and capital investments. It should also be the sole planner.

2. Common efforts are needed to create such a system of integrating science and production in which scientists would have a great interest in introducing the latest developments. Production workers should also have the same interest. We are already doing some things along these lines in our republic. All scientific research institutes with an agricultural profile have been transferred to the Transcaucasus Affiliate of VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin].

We have also set up a center for the introduction of scientific and technical achievements. All RAPO's have scientific and technical progress services engaged in the introduction of innovations. At farms this work is done by specialists. Thus, a general type of unified "science - production" system has evolved. Last year the economic effect from using scientists' developments in the countryside exceeded 60 million rubles.

3. Above all, the good, honest work of labor collectives should also assure solutions to social problems. There are examples of this everywhere. Many of our kolkhozes and sovkhoses are using incomes from public production to actively transform the countryside.

However, this matter should also be approached creatively, taking specific economic circumstances into account. A considerable share of farms, especially in the mountain zones, are working in unfavorable natural conditions and cannot allocate sufficient resources to solve social tasks. The state committee and rayon agricultural associations are attempting to help them, but they frequently encounter serious obstacles. In particular, it is hardly justified to have strict regulations over the use of sovkhos and kolkhos profits for social needs.

The agro-industrial situation would be better if managers and specialists were given greater economic independence, including in questions of labor stimulation.

#### BREAKING BARRIERS

A. Maksumov, deputy chairman, Tajik SSR Council of Ministers, chairman, Republic Commission on APK Questions

1. In order to manage, plan and finance the agro-industrial complex as a single whole it took time to make the next step in organizational and economic restructuring, which began throughout the country after the May (1982) CPSU Central Committee Plenum. The need to systematically improve the work of the APK was noted at the April (1985) Plenum.

It is important to give RAPO's full authority over the land and resources. Then they can more influence the work of kolkhozes and sovkhoses.

The Commission on APK Questions and oblast and rayon agro-industrial associations have taken many efforts to eliminate fragmentation and to give farms more independence. Much has succeeded. The partners are now more closely "tied" to the needs of the countryside. However, the new organ does not now have the main economic tool -- plans still come from different departments. Material and technical supplies come through several channels. Not having a single plan, RAPO's cannot exercise joint control with partners. Experience supports this.

In improving management we have had to attentively analyze the activities of numerous offices which have grown up alongside agriculture. Are they all needed? Do they hinder farmers? Obviously, excessive and redundant elements should be eliminated. I think that the RAPO apparatus should be strengthened. Experienced organizers and leading specialists should be attracted to its work.

2. The land should be the main object of scientific and technical progress in the APK. Selection, seed raising, agronomy, comprehensive mechanization and the use of chemicals should all increase its yields.



In our republic we rely on irrigated agriculture. We have fertile soil, almost year around sunshine and sufficient water. It is proposed to expand the irrigated area from 662,000 to 1 million hectares. In addition it is intended to mechanize most of this irrigation. True, much now depends upon machinery. At times there is not enough and its quality and productivity are low. The repair and service support for reclamation equipment must be thoroughly strengthened.

At a CPSU Central Committee conference it was noted that returns from investments in construction are, in general, somewhat higher than for new construction. As is known, this is one of the main problems in reclamation. Sometimes there is enthusiasm about the construction of new projects while old ones fall into disrepair and fertile land goes out of circulation.

Under our conditions intensification means harvesting two or three crops from a field. However, one can only take from the land what one has put into it. Consequently more organic and mineral fertilizers must be applied. Any specialization must be based upon the strict observation of crop rotations, especially in cotton growing. All is not well here.

There are two directions in the opening of piedmont regions. The first, to develop animal raising, is to set up cattle raising complexes such as the Tadzhikskiy and Khovaling. The combination of grazing and lot feeding results in low production costs. When the Khovaling reaches planned capacity it will produce 14,000 tons annually. A meat combine, canning plant and a number of other enterprises are being built here. In short, a genuine agro-industrial enterprise is being created on a 300,000 hectare area.

The second direction is viticulture. Here seedless table varieties predominate. There is a need for the appropriate storage facilities, transport and driers. There is a similiarly acute problem in strengthening the material-technical base for the production of juices, jams and canned fruits and vegetables.

3. It must be admitted that we often construct production facilities at pace setting rates. Social, cultural and service facilities get second priority. Farm and public savings are accumulating. Everyone wants to build, there are still many adobe houses in villages. However, the construction base and material-technical supply in the countryside will not permit the energetic modernization of settlements.

The time has come to get serious about services. In Tajikistan, Selkommunkhozy [Rural communal service units] are being set up by the republic Ministry of Communal Services. However, they are still weak. Take roads, for example. Why can't intrafarm roads be transferred to the Ministry of Highway Construction and Maintenance? There are only benefits from this. As we see, the conclusions are the same: break departmental barriers. In the final account, such barriers are expensive and lead to lagging in social services to the countryside.

## FROM THE HEIGHTS OF THE EXPERIMENT

V. Bulygin, council chairman, Belgorod Oblast Agro-Industrial Association

1. We at the oblast association and many workers feel that the agroprom lacks unity of plans and action. In particular why do RAPO still have only a weak influence upon kolkhoz and sovkhos economic indicators?

In no way do I want to belittle the successes of agro-industrial associations. We have succeeded in bringing order into intersectoral ties and in seeing that the partners, as they say, are not putting spokes through each others' wheels. Service organizations' plans are to a great extent based upon kolkhoz and sovkhos orders.

Centralized funds created at RAPO have been very beneficial to agriculture. Such resources were used to build the Beregovskiy and Peschanskiy interfarm plants for producing dry feed yeasts from food industry wastes. To a great extent this has solved the protein problem for animal farms. And it was a most important question. Thanks to agro-industrial integration several other such facilities have appeared in the oblast.

However, life does not stand still. It is becoming all the more obvious that the agro-industrial complex should be a single whole. Departments are very unenthusiastic about meeting farmers' needs. They do not want to give up their positions. Take, for example, these centralized funds. They were formed with great efforts. In 1984 the oblast "was shorted" 4 million rubles and this year only 9 million of a proposed 26 million rubles have arrived.

As a rule, RAPO attempts to redistribute material-technical resources end in failure. Departments at all levels are against it. It appears there is only one solution, further restructuring. All enterprises and organizations involved with the countryside should become wholly part of an agro-industrial association. They will receive plans and resources from it and only from it. I am confident that many contradictions would. Of course, it takes time to completely adjust the mechanisms of partners' relations to a nondepartmental basis.

2. First of all, we must more boldly master scientifically based zonal systems of crop production and intensive technologies. This requires a set of highly efficient equipment. This means restructuring the work of scientific institutions and enterprises in agricultural machinery building.

Much can be done on the spot, with the help of patrons. Not waiting for plan deliveries, we are building the necessary attachments and machines. Enterprises in the oblast were set up to build subsurface tillers for nonmoldboard tillage. Patrons gave great help in feed mill equipment, in the construction of enterprises for processing wastes from the food and dairy industries. As is known, this gave farms significant help in overcoming the shortage of feed protein and in saving large amounts of grain feeds [zernofurazh].

The acceleration of scientific and technical progress in the countryside is closely linked to the human factor. Therefore, exceptionally great roles are given to cost accounting and collective contract. They permit the most complete discovery of each worker's creative initiative, help in experimental thinking, the use of progressive technology and methods of organization and weigh each innovation on economic scales. For example, last year labor productivity in unregulated links was 1.5 fold higher than in ordinary links. More than 92 percent of all arable land is now attached to such collectives.

3. I think that the link between production efficiency and solutions to social tasks must be the most direct. Here is a vivid example. Several years ago the Kolkhoz imeni Kuybyshev in Ivnyanskiy Rayon was chronically unable to complete its plans. The production base was not bad, but little concern was given to creating the necessary conditions for kolkhoz farmers' daily life and rest. People were leaving. The oblast agro-industrial association council recommended that the farm increase capital investments in sotskultbyt [Social, cultural and service] facilities. About 2,000 square meters of housing, a kindergarten, a trade center, a service house and a sports palace were built. A preventive health clinic was built at the farm, the village water systems were expanded and roads built. What happened? Last year alone, 87 specialists, animal raisers and machinery operators, mainly young people, moved to the farm. The farm obtained about 4 million rubles of net income.

More than a million square meters of housing are supposed to be introduced in oblast villages during this five-year plan. The houses being built are primarily farmstead type units with running water, sewerage and gas. The system of kindergartens, hospitals, outpatient clinics and houses of culture were expanded. There was a halt to the outflow of people from Novooskolskiy, Ivnyanskiy, Veydelevskiy, Rovenskiy and Yakovlevskiy rayons. The agricultural population in Belogorodskiy Rayon increased by 5,000 people.

#### EVERYTHING IS LINKED TOGETHER

A. Kopylov, chairman, Novomoskovkiy RAPO, Tula Oblast

1. From the perspective of experience I feel that we are constrained within the framework of the standard statute for RAPO. It contains 62 points listing our obligations and only 19 points listing our rights. As you can see, the count is not in our favor. In general, without a systematic expansion of independence it is difficult to manage the agro-industrial complex as a unified whole. The main things are a single balance for finances and funds and the right to dispose of them in the interests of the entire APK and not its individual sectors.

It is now also clear that this right cannot be gained without further restructuring of the upper management echelons. In our opinion it is necessary to have a USSR Agroprom. Seen from below it is a state committee with full rights and authority managing all sectors of the APK. These latter should be consolidated. For example, together with the USSR Ministry of Agriculture, the following would be included with rights of subdivisions: Selkhoztekhnika, Selkhozkhimiya, the Ministry of Land Reclamation and Water Resources and the

Ministry of the Fruit and Vegetable Industry. In our view it is also advisable to include other partners. This should be the type for improving republic, oblast and rayon elements. This would result in a well structured system of management and planning, combining the territorial and sectoral principles -- a guarantee of economic balance.

2. After obtaining real possibilities for managing the APK as a single whole, it is possible to more successfully accelerate scientific and technical progress. It is the integration principle which will assure the greatest successes here. The day's agenda calls for creating effective production operations. We have already begun to develop them. Thus, we are introducing industrial technology for growing beets oriented not only for increasing yields and reducing production costs, but for improving transportation, reception and processing.

A comprehensive approach makes it possible to avoid excessive expenses, output losses and to have waste free operations which would extend from start to finish, from tops to syrup and pulp.

3. Such a systems approach is also necessary to the solution of social tasks. Accelerated scientific and technical progress has a favorable effect upon farms' financial situation. It is important not to dissipate resources. Today it is clear that just the construction of, for example, housing, does not solve social problems. They must be comfortable and well equipped, with full cultural and daily services.

We have a vivid example -- the experimental layout of the central farmstead at the Kolkhoz imeni Lenin. The compact, combining multi-unit apartment and individual houses, occupies a few hectares. On the "five" ["pyatachke"] there is a House of Culture, a trade center with a department store, a cafeteria and a workshop [atell], a swimming pool and a sports complex. This rational compactness made it possible to lay all utilities and to completely outfit the settlement. Thousands want to live and work here. High standards of production and management are the key to solving social problems, while high standards of culture and daily life are an additional stimuli to conscientious high pressure labor. In the agro-industrial complex everything is related.

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## AGRO-ECONOMICS AND ORGANIZATION

### RECOMMENDATIONS FOR IMPROVING APK STRUCTURE SET FORTH

Moscow PRAVDA in Russian 19 Jun 85 p 2

[Article by V. Vrana, chairman of the Rossiya kolkhoz, Novoaleksandrovskiy rayon, Stavropol kray: "A View From Below: Agroprom: The Reserves of Economics"]

[Text] The readers are continuing the conversation which was begun by machine operator Nina Pereverzeva (PRAVDA, 7 January) about the problems and reserves of the country's agro-industrial complex. The decisions of the April (1985) Plenum of the CPSU Central Committee, where the need for improving the APK management structure was emphasized, and the recent meeting in the CPSU Central Committee concerning questions of scientific and technical progress have deeply disturbed village workers and their partners. In letters to the editorial board, they are suggesting ways and methods to increase the efficiency of agriculture.

Today the steppe is being subdued by beauty. The grain crops have been spread like an emerald carpet up to the very horizon. My mood and that of all our Kolkhozniks is good. A good harvest is ripening. The past year has been successfully completed. For example, 40,000 tons of grain have been gathered--40 plus centners apiece per hectare--and the plan for the sale of meat and other products has been overfulfilled. Now, before the 27th Party Congress, we are striving to consolidate these gains and to begin to go even further.

The CPSU Central Committee has adopted a course for a more energetic improvement of all aspects of the socio-economic life of society and for accelerating scientific and technical progress. This will impart strength and confidence. The problems connected with it especially worry us who are people of the soil. The party is devoting much attention to improving the management structure of the agro-industrial complex. It is exactly there, in my opinion, that the chief source of the problems lies.

As N. Pereverzeva and other comrades correctly wrote to PRAVDA, we are striving to assimilate full cost accounting (Khozraschet) and are counting every ruble. But the service organizations often have their own cost



accounting--and they are trying to increase their profits. In order to do this, they need to take a little more from the kolkhoz. And they are taking it by any means, and at times even by illegal ways. Last year alone our lawyer awarded more than a quarter of a million rubles in favor of the farm.

From this one can understand that, alas, we are not living in complete harmony with our partners. But we are forced to go begging to them. For indeed they have the resources without which the kolkhoz cannot manage. And, making use of them, they dictate the conditions.

You arrive in the rayon center, Novoaleksandrovsk, and there, as they say, is an overlapping (cherepolositsa). There are repair shops and garages at every step. The Agrochemical association (Sel'khozknimiya), the land reclamation specialists, and the rural construction ministry (Sel'stroy) have them. And there is one yard after another with a sawmill, a carpenter's shop, a cement slurry unit and an asphalt plant. In the rayon there are 11 construction organizations working for the village. And each one of them, whether it be of the PMK [mobile mechanized column] of the Sel'stroy system, or the interkolkhoz construction organization or of the land reclamation specialists, has its own office aside from its base.

On the whole, at the present time the resources are dispersed--our agriculture resources. At the same time, RAPO (the rayon agro-industrial association) still has not been able to combine forces. Planning--the core of management--is being conducted from various economic organizations. Each one is managing its part of the agricultural industry. The basic processes--from creating a base to its utilization--are being developed and improved on a departmental basis.

All of us, of course, are pleased that the problem has been raised today by the party. There should be a single boss on the soil. This problem is not simple. But I am certain that it can be solved under the conditions of our society with its advantages of a socialist, planned economy. I, like many of my colleagues, heartily welcomed the idea expressed at the April Plenum of the CPSU Central Committee that the agro-industrial complex should be managed as a single whole on all levels. Such an approach comes from life.

Today we, as practical workers, are talking a lot about the management structure in the agro-industrial complex at meetings, at conferences and at consultations. What kind of structure should it be? This is a complicated question.

It, like the complex itself, is probably viewed differently from the various departmental "levels" of the agricultural industry. I think that it is more important to have a look at it first of all "from below," from the soil.

I will begin with mechanization. It is talked about and written about most often. And we, as practical workers, are not sitting idly by and

examining different versions. We have been seeking for a long time in the kray how better to organize the management of this important matter. Inter-farm Enterprises of the Rayons (MKhP) have been created which are a united and essentially engineer service for kolkhozes, sovkhoses and the Selkhoztekhnika [Agricultural Equipment Association]. Many positive things have been done there. But it is thought that it is necessary to go further. The present engineer service is still cut off from the farms. The specialists are agreeing more and more that it should be fully subordinated to the kolkhoz. And that the RAPO department for mechanization and electrification can become its continuation. The rayon service and repair enterprises ought to be subordinated to it. The salaries of the persons in this department would be calculated best on the whole from the results of the production of output in the fields and in the farms. Then, in our view, it will turn out that the most important principle will be sustained both on the level of the kolkhoz (sovkhos) and on the level of the rayon: one boss on the soil.

In the interests of basic production, RAPO and its department are determining where and who should service and repair equipment, where and what kind of base should be created and strengthened, and where spare parts should be sent. For us, for example, many of these operations would be fulfilled more successfully in the kolkhoz. I will present only one case. There were vacant sheds for storing equipment in the machine yard. They were re-equipped for a repair depot. It cost 5,000 rubles. During the past winter 28 grain harvester combines were repaired there, including seven which underwent major repair. And the result? We spent 19,000 rubles--half as much as would have been spent in the rayon center. Through our own efforts we fixed tractors, corn harvester combines, and feeder and irrigation equipment. This makes it possible to employ people more fully, especially between seasons, and to avoid unnecessary hauls and loads.

Of course, a farm cannot carry out certain kinds of operations on a high-quality level. For example, the repairing of hydraulics and fuel equipment. And it is there that the RAPO mechanization department will decide where to conduct it most advantageously at the inter-rayon repair enterprises or at the manufacturing plants.

We have established normal, business-like relations with the rayon Sel-khozkhimiya. Last year it helped to conduct an experiment: one of the winter wheat fields was cultivated by intensive technology. Fifty-five centners of grain apiece were obtained from each of the 500 hectares.

Of course, we strive to bring the Sel-khozkhimiya closer to the farm. We have set out on such a path: we have given it a portion of our people, of our warehouses and of our consumer services organization, and certain types of mechanisms. We are distributing the profit from the harvest increase equally. Those who have gone over to it enjoy all the privileges of the kolkhozniks. And we are giving out bonuses for the year's totals. It is almost as if the agro-chemical service has become a whole.

But, as in the sphere of mechanization, life and RAPO's work experience are already prompting a still better version. Our chemists are now

totally cut off from the agronomical and other rural services. Both on the farm and on the rayon level.

I have in mind the organizational aspect. Again they have their own plans, resources and base... And, you see, this is a part of the agricultural service and it should be fully subordinated to it. In the kolkhoz and sovkhoz--to the chief agriculturalist. And in the rayon--to the RAPO agriculture department.

We, as practical workers, see a chemization group, even if only a small one, in this department. And additional expenditures? On the contrary, an enormous saving. You see, this subdivision would replace the solid managerial apparatus of the rayon agrochemical association. The salaries of the specialists of such a group should be determined by the harvest and by the reduction of expenditures for it. And then, in my opinion, the principle will be fully sustained: the soil, the cadres and the means of production will be in one hand.

It is as apparent that life demands that the walls dividing rural workers and land reclamation experts be removed. It is not by accident that collaboration teams have appeared in a number of the Black Earth rayons, as I learned in the press. This happens when specialists in land reclamation have free equipment and resources, and when there are machine operators from the farms. It is portentous: they are breaking the departmental boundaries from below.

A few words about construction. Contractors are now taking too much from us for services and they are carrying out jobs without regard for quality. The Kraykolkhozstroy association's mobile mechanized column is erecting a House of Services in the kolkhoz and one of the cow barns. The prices for the projects are such that it would be better if we built them ourselves. Our self-supporting Khozraschetnaya construction brigade, in which there are 95 persons, during the last four years has built, for example, 18 pig sties and saved 192,000 rubles in doing so. But it is not easy to obtain materials, except for brick (we have our own plant).

Why are contractors' services expensive? It is because these organizations are splintered and small. If similar building subdivisions were united and subordinated to RAPO, the business would go better. You would not have unnecessary offices nor a scattering of resources.

By the way, about the expensiveness of services in general. It is now somehow founded economically. Enterprises which service the village are often based far from the field and the farm. It is necessary to pay for the transfer and moving of people, spare parts, etc. Again, the apparatus is large. If there are 30 persons in the staff of our RAPO, then the managerial personnel is already reaching 200 in the subdivisions of Sel'khoztekhnika of Sel'khozkhimiya, of the land reclamation specialists and of the builders. It is sevenfold larger than in the basic agricultural organization. And we, to put it bluntly, maintain them.

And it is the same with the processing branches. Much has been said and written about this, and I will not repeat myself. For example, we have a butter and cheese plant in Novoaleksandrovsk. If we transfer it to RAPO, the problems concerning centralized transportation and financial relations would be solved more easily and more quickly. Having combined resources, the "tight" places would be "undone": access roads to farms would be improved, projects would be built, and equipment would be obtained.

In a word, I, like many readers, am more and more convinced from my own experience that the rayon agricultural industry needs RAPO on a nondepartmental basis. One boss. With comprehensive branch subdivisions. And such an enterprise should be planned and financed and managed as a single whole. By the way, much is being done in this direction. Take the Estonian version. There, as far as I know, a number of services have been joined into one agricultural service enterprise.

But how is the dray (oblast) link of the agricultural industry seen from below? Also as a single, logical continuation of the rayon [link]. This organization, which makes it possible to solve comprehensively all the problems of the agro-industrial complex, should be made, like RAPO, self-supporting (from the end production). Then both the planning and the creation of a base for the agricultural industry, and its utilization, will be oriented exactly on basic goals--an increase of the efficiency of combined production.

The party has always considered the problems of agro-industrial integration extremely important. Already, it can be said, at the dawn of collectivization the November (1929) Plenum of the VKP(b) Central Committee noted the need for industry and for kolkhozes and sovkhozes in all possible instances to create joint sovkhoz-kolkhoz enterprises with an agreed-upon economic plan, with a common technological base (tractor columns, repair shops, etc.), and with common enterprises for processing agricultural products (butter, cheese and flax manufacturing plants, mills, etc.).

Conditions have now been created in order to make our agro-industrial complex complete as to structure and efficient as to end results. If we go from rayon and oblast and kray "vertically," then such organizational principles are possible both on the republic and on the union level. It is true that on the union [level] it would not do any harm (immediately or in the second stage) to subordinate the production of mineral fertilizers and agricultural machine building to the agro-industrial complex.

Our country is large. There are various conditions. But, in general, the organizational and economic principles of management are the same.

It is possible that not everyone shares my point of view. There, I think, many things require a scientific and economic interpretation and calculation. However, the opinion of practical workers must be considered more fully. That's how I and many of my colleagues see the agricultural industry.

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## AGRO-ECONOMICS AND ORGANIZATION

### FEED, EQUIPMENT NEEDED FOR TAJIK PRIVATE PLOTS

Dushanbe SEL'SKOYE KHOZYAYSTVO TADZHIKISTANA in Russian No 2, Feb 85 pp 44-46

[Article by A. N. Nasyrov, director of the State Inspection of Livestock Production Purchases and V.M. Bubnov, group leader, Ministry of Procurement Tajik SSR: "The Needs of Private Plots"]

[Text] Surpluses in horticultural and livestock production on individual private plots are transacted by means of state purchases, through the consumer cooperative and kolkhoz market. In order to organize and plan this process on a high scale and to create optimal conditions for a guaranteed and lucrative marketing of individual surpluses with the state, there exist Standard Contracts, whereby kolkhoz workers, farm laborers, sovkhoz staffers and other citizens may, if they so desire, sell their excess cattle, poultry, rabbits, farm and livestock production to the state on terms and at prices set out in the contracts.

Purchases of agricultural production from private plots have increased significantly since the May (1982) Plenum of the CC CPSU. In Tajikistan in 1983 agricultural production on private plots accounted for 23.2 percent of total farm production in the republic; in addition, 41.8 percent of total livestock production and 14.5 percent of total horticultural production came from private plots. The value of gross livestock production on individual plots was 196.5 million rubles, and of horticultural production, 146.2 million rubles, an increase of 18.5 and 3.6 million rubles respectively over 1980.

The total volume of state purchases from the people in 1983 is as follows: cattle and poultry-1,898 tons; milk-18,212 tons; eggs-8,558 million units; wool (in pure fiber)-1,508 tons; vegetables-98,770 tons; melons-40,900 tons; fruits-6,500 tons; grapes-15,556 tons.

However, it must be pointed out that still not enough attention is being paid to developing private plots in the republic, that plotholders are sold building materials, fertilizers, feed, feedbags and other implements in small quantities, that grazing and haying land for private cattle is not assigned everywhere. There are very few, and in some cases, altogether no private transactions involving calves or young poultry. All of this has negative implications in terms of increasing head production, and sometimes explains declines in head production. For example, the number of private head of large horned cattle in Kurgan-Tyubinsk Oblast declined 1 percent from 1982 to 1983. In the



Leninskiy Rayon the decline was 3 percent, and in the Tursunzadevskiy Rayon the figure was 2 percent. In the republic as a whole the number of head of hogs was down by 3 percent, and in Kurgan-Tyubinsk Oblast the decline was 14 percent. The number of sheep and nanny goats in the Hissarskiy Rayon was down by 3 percent.

It cannot be viewed as acceptable that there was a significant increase in the number of private plots in the republic without cattle. In 1983 the increase was 9,000 over 1982 for a total of 73,800. At the beginning of 1984 in the republic as a whole almost one family in six living in a rural area had no cows and half of all plots had no sheep or goats.

The difficulties of feed procurement constitute one of the main reasons for the increase in the number of cattleless private plots. This is also causing a slow growth in cow milk yields compared with the public sector. In 1980 the average milk yield from private plots was 780 kg, in 1983 it was 805 kg (in state animal farms it was 2313 and 2349 kg respectively).

Agricultural production on private plots is the private property of the landholders. Purchases are done strictly on a voluntary basis in accordance with listed state purchase prices, which are uniform for all categories of plots.

In order to avoid overpayments or underpayments, cattle must be bought from kolkhoz workers and other citizens at the prices in effect in the locality of the sale within the range of 1.15-2.21 rubles for 1 kg of live weight.

The October Sovkhoz in the Phayzabadskiy raion, Koktashskiy Sovkhoz in the Lenin raion, and M. Gorkiy Sovkhoz in the Garmskiy Rayon, had well organized cattle sales from private individuals in 1983. In these places, workers and staff selling cattle were given land for planting feed grains, for the feed itself and for grazing. The return on cattle sold was significant for the private landholders. In 1983 in the Lenin Kolkhoz of the Tursunzadevskiy Rayon it totaled 54,400 rubles, and at Koktashskiy Sovkhoz it was 18,700 rubles.

At the same time there are kolkhozes and sovkhoses in the republic in which gross violations of the cattle purchasing system occur. For example, between 1981 and 1983 the Forty Years Of October, Kolkhoz in Kolkhozabadskiy Rayon purchases 449 head of cattle for a total live weight of 1,203 metric quintals at 480,570 rubles. The average price of one kilogram of live weight was 3 rubles 99 kopecks. Basically the cattle was purchased at arbitrary prices: from R2.50 to R10 per 1 kg of live weight. The kolkhoz took a loss on cattle bought and slaughtered of 29,100 rubles in 1981, 12,400 rubles in 1982, and 3,700 rubles in 1983. The Leningrad Kolkhoz in the Vakhshskiy raion, also had overpayments on their cattle purchases. The average price of 1 kg of live weight fluctuated from R2.30 to R7.00. Within the past three years they have purchased 510 head for a total live weight of 1,226 metric quintals at 418,900 rubles. Of the total private cattle sales, 85 head for a live weight of 291 metric quintals were slaughtered after the appropriate feeding and fattening. The kolkhoz lost 72,900 rubles on the sale of these animals.

High-priced cattle purchases also take place in the Lakhuti Kolkhoz in Ayninskiy Rayon. Within three years they have purchased 497 head of cattle for a total live weight of 1,315 metric quintals at 414,838 rubles. Of these, 316 head for a live weight of 967 metric quintals were slaughtered. The loss was 67,700 rubles. This kolkhoz fulfills the state plan for cattle procurement mainly through the purchase of private animals.

In order to increase livestock production in private plots it is first necessary to provide the cattle with feed and to refrain everywhere from the shameful practice of purchasing private cattle at above-market prices. At all farms it is necessary to create a social climate whereby kolkhoz workers, laborers, employees and other citizens would feel that by raising cattle and poultry on private plots, and cultivating vegetable gardens and orchards, they were performing useful work for the state. It is also imperative in due course to provide private plots with building materials, chemical fertilizers, farm implements, machinery, packaging and other goods needed on a private plot. Only measures of this kind will provide families with an incentive to raise cattle and to develop private plots.

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AGRO-ECONOMICS AND ORGANIZATION

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BELORUSSIAN RAPO FUNCTIONING EVALUATED

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 5, May 85 pp 72-77

[Article by A. Stul'ba, deputy main administration chief, Belorussian SSR Ministry of Agriculture: "The First Stage of the Origins and Problems in the Functioning of RAPO in Belorussia"]

[Text] In accordance with the May (1982) CPSU Central Committee Plenum and USSR Council of Ministers decisions concerning questions in the development of the agro-industrial complex in Belorussia and its oblasts and rayons, kolkhozes and sovkhozes, purposeful organizational work is under way to implement them.

One hundred seventeen rayon agro-industrial associations have been formed in the republic, they include 5,170 enterprises, of which 2,772 (54 percent) are kolkhozes, sovkhozes and interfarm enterprises, 894 (17 percent) are organizations servicing agriculture, 414 (8 percent) are construction organizations and 694 (13 percent) are other enterprises and organizations .

The activities of RAPO councils are, above all, directed towards implementing the Food Program, increasing the production of agricultural products and improving their quality. Monthly meetings of RAPO councils examine questions in the improvement of intersectoral ties, increasing the responsibility and interest of workers at service, procurement and processing enterprises and organizations in the achievement of high final results, in strengthening the economies of kolkhozes and sovkhozes, introducing intrafarm accounts, progressive forms for labor organization and payment, the achievements of science, technology and progressive experience. Primary importance is placed upon increasing the efficiency with which land, capital investments, material-technical resources, labor, financial and other resources are used.

Many RAPO councils are quite fully using their broad authority as management organs. Their great role is primarily manifested in efficiency improvements in the functioning of the potentials created in the countryside. There have been marked improvements in coordination in working out plans and making strategic and day to day decisions on intersectoral questions.

All this played a not inconsiderable role in the agro-industrial complex's achieving positive economic results in 1984. Compared to 1983 gross agricultural output increased by 6 percent, and labor productivity by 6.7

percent. The gross harvest of grain rose by 25 percent, that of potatoes by 14 percent, of sugar beets by 3 percent. The production of the main types of livestock and poultry increased by 10 percent, that of milk by 6 percent and of eggs by 2 percent. There were improvements in the productivity of livestock and poultry. Except for flax, the plans for the sales to the state of all types of agricultural products were fulfilled and overfulfilled. In 1984 the republic's kolkhozes and sovkhoses obtained 1,564,000 rubles of profits, or 9.7 percent more than in 1983. The profitability of social production was about 33 percent.

The Slonimskiy RAPO council in Grodno Oblast is doing a lot of work on tasks facing the new management organs. In order to work out a unified agricultural policy, exercise leadership over enterprises and organizations in the RAPO Council based on the principles of unity of command, eliminate departmental fragmentation in management and improve the results from specialists' work, the following unified services for the management of rayon APK sectors have been created: agronomic, engineering-technical, zootechnical, plan-financial, legal and personnel. As a result, an association apparatus of homogenous services of enterprises and organizations has become the working organ for the RAPO. For example, the unified agronomic service is led by the chief agronomist of the rayon agricultural administration. It includes specialists from the rayon agricultural administration, groups for industrial seed production, agronomists from the rayon agrochemical administration, and chief agronomists at kolkhozes and sovkhoses. The unified services' work is based upon close coordination with the appropriate units of kolkhozes and sovkhoses and enterprises and organizations in the rayon agro-industrial complex.

The new management conditions have considerably increased the requirements made upon rayon sel'khoztekhnika with regard to the state of technical servicing and repairs of the machine and tractor fleet at kolkhozes and sovkhoses, the implementation of measures to improve contractual relations and to reexamine piece work rates for work and services. There is precise planned-preventive technical servicing for dairy farms in the rayon.

The RAPO Council was among the first in the republic to introduce a progressive system for economic relationships between the rayon sel'khoztekhnika and kolkhozes and sovkhoses for the technical servicing of milking and cooling equipment. While previously, farms paid technical servicing stations for services rendered through certificates [akty] for services completed, now mutual accounts between organizations are based upon an annual limit for outlays which has been worked out by VNIITIMZh (All-Union Scientific Research and Technological Institute for the Installation, Operation and Repair of Machinery and Equipment on Animal and Poultry Farms) and approved by the USSR Ministry of Agriculture and USSR Goskomsel'khoztekhnika.

The annual limit on outlays includes the value of work performed during the calendar year and aimed at assuring the technical readiness of animal raising machinery. It is the basis for estimating the plan period's work volume and funds for wages, material incentives and material outlays.



Farm accounts with Sel'khoztekhnika for technical services and repairs on animal raising equipment are made as plan payments. Total payments during the year are set proportionally to the periods for performing the services and are equally distributed. If the work is not performed in accordance with the planned schedule, the agent is not paid.

In this form of economic accounts, the following group of indicators is the criterion for estimating production activity: the coefficient of operational reliability, economies in material outlays, the fulfillment of animal product production plans and product quality.

Payments for the labor of fitters-adjusters depend directly upon the quality of repairs, their timeliness and the absence of breakdowns in equipment. The fitters' (including electricians) links are not paid piece rates, but have a stable rate with additional payments for quality indicators. For example, for timely technical servicing and for high quality they are paid up to 15 percent over their rate, and for using spare parts within the limits of the norm -- 10 percent. In summing up the results of socialist competition the main indicators for determining the victor are: the observation of repair schedules, reliability of equipment operation and quality of the milk sold.

The new system of economic relationships considerably reduces farm outlays, increases the responsibility of those performing the work and has resulted in savings of spare parts, the use of which has reduced two fold.

The introduction of progressive technology for the repair and technical servicing of animal equipment and its subsequent diagnosis by special devices has improved the qualitative characteristics of equipment operation. For example, the technical readiness factor for equipment accepted for technical servicing is 0.99 - 1.00 and equipment breakdowns have been reduced more than eight fold.

In the final account, the good condition of equipment has had a positive influence upon product quality. While previously about 70 percent of the milk arriving at the butter plant was grade A, now it is at least 95 percent, what is more it is chilled. Because of this difference alone, kolkhozes and sovkhoses received more than 500,000 rubles of net profit in 1983.

At the Rayon Sel'khoztekhnika there has been a increase in spare part assortment and rebuilding, and there is precisely organized technical servicing for power equipment. The OVT-1 sprinkler, vacuum pumps for the Polish produced milking room and other equipment are being repaired.

Direct production ties between kolkhozes and sovkhoses and other RAPO partners have become more stable. In 1984 all milk and livestock were centrally delivered to meat and dairy industry enterprises. There are solid relations between the flax plant and kolkhozes and sovkhoses. Enterprise collectives are giving great assistance to farms in the introduction of comprehensive mechanization for flax harvesting and are supplying them with high quality



seeds. Flax stock and straw is received directly at production sites. There are fewer differences in the evaluation of product quality. The average grade number for flax stocks received in 1984 was 1.15, while the profitability of flax raising was 133 percent.

In order to equalize production conditions the RAPO Council has formed centralized funds for production development, housing construction, social-cultural measures and material incentives. This is done through deductions from the corresponding funds of kolkhozes and sovkhoses, enterprises and organizations in the association. Additional measures have been worked out to control the observation of account procedures with enterprises and organizations servicing agriculture.

As a result of the RAPO Council's work to increase the economic efficiency of agricultural production, the rayon successfully fulfilled the gross output plan for the five-year plan's fourth year. Kolkhozes and sovkhoses fulfilled practically all production and sales plans for all types of agricultural products during the fourth year. In 1984 they obtained 21.5 million rubles in profits and the profitability rate was 40 percent. All farms in the rayon are profitable. In the 1984 All-Union Socialist Competition the rayon was awarded the Red Challenge Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee. The rayon was also the victor in republic wide socialist competition for the successful fulfillment and overfulfillment of 11th Five-Year Plan targets for meat production and state sales in 1984.

To a great extent, the Vileyskiy RAPO in Minsk Oblast also has a businesslike style and work methods. The agro-industrial association council does a lot of work in coordinating the activities of kolkhozes and sovkhoses and other enterprises and organizations in the association to get them to more fully and rationally utilize their production-economic potentials and materials in order to increase the efficiency of agricultural production and solve tasks arising from the Food Program. Following the example of the Novomoskovskiy RAPO in Tula Oblast, a single service for the management of APK sectors has been set up in the rayon, rates for work and services rendered by partners have been reexamined and approved, a system for monitoring the implementation of RAPO Council decisions has been developed and there have been substantial improvements in the work to protect the economic interests of kolkhozes and sovkhoses.

A center for the management of transportation (TsUP) has been formed at the motor vehicle enterprise of the Rayon Sel'khoztekhnika in order to improve transportation services to kolkhozes and sovkhoses and other enterprises and organizations in the Vileyskiy RAPO, to exercise operational management over all motor vehicle transportation independently of departmental subordination, to introduce progressive methods for transport organization and to create conditions for the highly productive use of vehicles.

The TsUP is studying freight flows, making suggestions for the arrangement of activity zones for transportation units, taking measures to reduce the idle time of motor vehicles during loading and unloading, exercising operational

control over hauling the harvest, and analyzing the efficiency of motor vehicle utilization. The RAPO Council has transferred all mixed feed trucks from the farms to the Rayon Sel'khoztekhnika. Feed is now promptly delivered to farms. There has been a 1.5 fold increase in labor productivity in motor transport and reductions in fuel use. The central management of trucks during grain hauling reduced the need for them by 32 percent compared to 1983. Overall, the time needed to deliver grain to the state was reduced by 8 days and output per truck increased by 46.2 percent.

Experience in the operation of the center for the management of transportation showed that it is possible to combine the efforts of all transport enterprises in the rayon to assure the timely and complete delivery of freight and to improve the technical-operational and economic indicators of fleet operation.

The Council of the Krichevskiy RAPO in Mogilev Oblast is searching for ways to increase the responsibilities of Rayon Sel'khoztekhnika workers for the technical condition of farms' machinery-tractor fleet and the efficiency with which it is used. Each kolkhoz or sovkhov has an engineer-technologist, who is involved in ties between the Rayon Sel'khoztekhnika and the farm. There have been changes in the system of accounts between farms and this Rayon Sel'khoztekhnika. They are based upon an annual limit on outlays for the repair, servicing and storage of agricultural equipment, which is set for each kolkhoz or sovkhov. The limit does not exceed the past three years actual level per 1 ruble of gross output in 1973 prices.

There are several other examples of the search for ways to improve the economic mechanism. However, it should be noted that some agro-industrial association councils are slow in restructuring work in light of contemporary requirements and do not completely utilize their rights as defined by the Statute on Rayon Agro-industrial Associations.

There have been no changes in the existing style and methods of work of some rayon agricultural administrations as the working organs for agro-industrial associations.

The strengthening of contract discipline is an important condition for improving economic relations. A contract is the basic document defining the rights and obligations of parties.

There are cases where farm managers and specialists have a poor knowledge of contractual conditions and rarely levy fines on service enterprises and organizations for not meeting delivery deadlines or for making incomplete deliveries, for the failure to perform agrochemical work within the time set by contract, for its poor quality, etc.

Because of all this, there are often cases of farms making erroneous calculations [obschet] and poor quality equipment of repair and services to kolkhozes and sovkhovs. Thus, between 1 January 1983 and 31 May 1984, farms in Uzdenskiy Rayon, Minsk Oblast, should have levied a total of 20,000 rubles in fines on the Rayon Sel'khoztekhnika for untimely fulfillment of contracts,

increased rates, padded accounts of work performed and uncompensated transport expenses. These are not the only such cases.

These take place because some all-union and republic ministries and departments are insufficiently up to date in the organization of their activities relative to the new conditions. There are still also departmental approaches to the solution of many questions in the development of the APK.

RAPO councils are faced with problems of properly organizing the signing of contracts, engaging the legal services of rayon sel'khoztekhnikas, assuring constant control over the performance of contract conditions, decisively struggling against farms' unprincipled attitudes towards receiving work and rendering services, defining the value of such work, with farms' refusal to take sanctions against service enterprises and organizations for violations of contract discipline and with miscalculations on the part of the latter.

The beginning of rayon agro-industrial associations should be accompanied by systematic and planned work on improving their organizational structure for management, the activities of RAPO councils and their working apparatus. With these purposes in mind, the Vileyskiy RAPO in Minsk Oblast and the Polotskiy RAPO in Vitebsk Oblast have been delineated at the republic bases for research and development on questions concerning the most complete use of existing organizational and economic mechanisms for operations and for testing, under specific production conditions, of proposals for further improvements in planning, the structure of administration, production-economic ties between kolkhozes and sovkhozes and service, procurement and processing enterprises and organizations and on other problems in RAPO activities.

In order to perfect the organizational forms of agro-industrial association activities, the Belorussian SSR Ministry of Agriculture has sent, to the associations, the statute on departments of rayon agricultural administrations and recommendations on organizing RAPO activities worked out by the USSR Ministry of Agriculture jointly with the All Union Scientific Research Institute for Agricultural Economics.

Together with the Belorussian SSR Ministry of Agriculture, the Belorussian Scientific Research Institute for the Economics and Organization of Agriculture has completed the preparation of job descriptions for rayon agricultural administration apparatus specialists.

Further improvements are required in the service for planning, managing and organizing construction in the countryside. The existing system for managing major construction is cumbersome and fragmented. Each ministry and department which is planning major construction in the "Agriculture" sector, has, as a rule, its own construction services in the republic and in oblasts. There are also such services in the apparatus of the BSSR Ministry of Agriculture, subordinate republic main administration and agricultural administrations of oblispolkoms. However, RAPOs have practically no sectoral administrations for major construction. This results in violations of the principle of sectoral

planning and the use of capital investments and material resources. Consideration is not always given to enterprises' supplies of fixed productive and nonproductive capital, labor resources, or to plans for the production and procurement of agricultural products and the size of the herd.

In our opinion it would be advisable to form major construction divisions in RAPO.

The first stage in the functioning of agro-industrial associations has shown that the structure and size of the RAPO council working apparatus do not completely correspond to the nature of work under the new conditions. Because the rayon agricultural administrations have been entrusted with the functions of the RAPO working apparatus, there have been considerable changes and complications in their work volume, and an expanded circle of duties, above all linked to solving problems of an intersectoral character. Moreover, in the process of bringing order into the management of sectors in the agro-industrial complex, some trusts, associations and other organs have been liquidated and the state farms (goskhozy) subordinate to them have been transferred to rayon agricultural administrations.

At the rayon level there were also requirements to give more attention to problems in the operation of citizens' private plots, the subsidiary agricultural operations of enterprises and organizations and institutions, and to problems in the social development of the countryside. The performance of these additional management functions makes it necessary to staff rayon agricultural administration staffs with highly qualified personnel, competent not only in agriculture, but also in related sectors. However, the filling of these positions with such personnel is hindered because the pay rates for these categories of workers are considerably lower than for kolkhoz and sovkhoz specialists. It would be advisable to give oblispolkoms and rayispolkoms the right, within the limits of the wages fund, to make changes in the ratio of senior and chief specialists.

In our view it is necessary to change the frequency of RAPO council meetings. Such meetings should be conducted once a quarter to examine and solve the most important problems of an intersectoral character involving the prospects for the development of the rayon's agro-industrial complex. For the day to day leadership over association activity there should be a council presidium which would be the executive-management [rasporyaditel'nyy] organ.

The statute on the procedure for the formation and use of centralized funds for regional agro-industrial associations should be made more specific. It is necessary to simplify the procedure for forming centralized funds for production development. This means giving union republic gosplans the right, during working out plans for economic and social development to, in accordance with approved norms for deduction and without agreement of ministries and departments, include individual entries of resources subject to transfer to the centralized fund for agro-industrial association production development.



Because there are enterprises and organizations which are not prompt in transferring resources to centralized funds of associations, and some which refuse to participate in their formation, agro-industrial associations should be given the right to make payment requirements for deducting these sums from the accounts of enterprises and organizations .

Also, in our view it is justified to give RAPO councils the right to make the following redistributions without agreement: from enterprises and organizations within the association, 10-15 percent of the material-technical resources allocated to them; and from sectoral superior organs, following the results of plan fulfillment for quarters I-III of the current year, capital investments not utilized by individual enterprises and organizations .

It is known, that under existing rules for receiving agricultural products from kolkhozes and sovkhozes, procurement organizations often do not objectively evaluate their quality. It would therefore be advisable, in accordance with the CPSU Central Committee and USSR Council of Ministers Decree "On Measures to Improve the Economic Mechanism and to Strengthen the Economies of Kolkhozes and Sovkhozes" to set up, at RAPO, intersectoral inspectorates for the purchase and quality of agricultural products. These inspectorates should monitor the quality of agricultural products sold by farms, the observation of standards, the accuracy of determining product quality and of accounts, and prevent losses and spoilage. This would make it possible to objectively determine product quality and would also free farm specialists from control over sales to procurement organizations.

Solutions to these questions will assist in improving the management of agro-industrial associations. As practice shows, the creation of RAPO has improved farm activity, made a substantial step in the elimination of departmental fragmentation, assured the more rational combination of territorial and sectoral management and strengthened coordination over the activities of enterprises and organizations in agro-industrial associations. The new system for the management of agriculture functioning in the republic has, on the whole, justified itself although at some levels it still needs improvement.

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## AGRO-ECONOMICS AND ORGANIZATION

### FUNCTIONS OF SCIENTIFIC-PRODUCTION ASSOCIATIONS REVIEWED

Moscow PLANOVoye KHOZYAYSTVO in Russian No 6, Jun 85 pp 90-94

Article by V. Mashenkov, doctor of economic sciences and deputy director of the All-Union Scientific Research Institute of Agricultural Economics and M. Tarasova, candidate of agricultural sciences and senior scientific worker at the All-Russian Scientific Research and Planning Technological Institute for the Use of Cybernetics in Agriculture: "Role Played by Scientific Production Associations in Accelerating Scientific-Technical Progress in Agriculture"/

Text On 1 January 1985 there were 56 scientific-production associations operating within the system of agriculture, of which number 22 were field crop husbandry, 13 livestock husbandry, 16 all-purpose and 4 for mechanization; 45 percent of them were created over the past 3 years. At the present time, the active process of organizing NPO's scientific production associations is continuing within the ministerial systems for agriculture, the fruit and vegetable industry, the food industry and in other branches of the APK agroindustrial complex. One of the chief tasks of the work of these associations is "the production of high quality and hybrid seed and planting stock for high reproductions and the raising of pedigree livestock for delivery to kolkhozes and sovkhoses."\*

What are the principal advantages of the NPO's compared to other forms for linking science with production?

The special purpose functions of NPO's -- shortening the "research - production" cycle and expanding considerably the scales for introducing scientific achievements into mass production throughout the branch -- are being carried out by combining the individual stages of a given cycle in time and space. In the process, priority importance is being attached to ensuring unified guidance for the principal executive agents.

The combining in space is carried out owing to the potential of the NPO's for carrying out an entire cycle of operations simultaneously in all of the principal soil-climatic zones of a region in which an association must have

\* "ProdoVOL'stvennaya programma SSSR na period do 1990 goda i mery po yeye realizatsii" USSR Food Program for the Period Up To 1990 and Measures for Implementing It. Moscow, Politizdat, 1982, p 55.

its own structural units.\*

Agricultural NPO's include scientific units (scientific-research, planning-design, technological institutes, their branches; branch, plant breeding and zonal experimental stations, independent laboratories, support points, GSKB's /state special design offices/ (design offices) and others); production units, (testing and experimental farms, elite seed production, nursery production, specialized breeding sovkhozes, sovkhoz-plants, experimental technological and machine building and seed cleaning plants, artificial insemination stations and others); training units (technical schools, sovkhoz technical schools, annual schools and programs for improving skills and other subunits engaged in training personnel for the branch); cost accounting departments, scientific-production laboratories, special bureaus, planning bureaus, support-installation and start-up and adjustment enterprises, mechanized columns, printing-duplicating production and others.

The chief output of NPO's are results of their scientific studies, which are employed extensively in agriculture and which promote the production of the final product. The leading element is the scientific-research organization, which possesses adequate scientific potential for achieving accelerated solutions for the all-round scientific-technological problems concerned with branch development. The best variant is when the NPO heads a branch scientific-research institute.

The principal task of the production structural units of NPO's is a production inspection and the working out of zonal industrial technologies, the raising and selling to farms in the zone serviced of high quality seed and seedlings of high reproductions and material for the reproduction of pedigree animals and also the production of small batches of new equipment and other new products depending upon the association's specialization.

The scientific achievements of NPO's are realized through the series production of new products and improvements in the skills possessed by the personnel. Possessing a broad production base, the NPO's work out and introduce the results of scientific studies at their experimental farms, specialized sovkhozes, livestock husbandry complexes and experimental plants. Republic, zonal, oblast and rayon conferences, seminars and other forms of training are carried out on these farms.

The scientific-production associations participate directly in the formation of plans and in summarizing reports concerned with the introduction of the achievements of science, engineering and leading experience into agricultural production, they issue technological charts for the production and processing of products in accordance with an association's specialization, they organize exhibits, they publish scientific works and they supply the agricultural workers with scientific-technical information.

Let us examine the work of the Uzbek NPO for Horticulture, Viticulture and Wine-Making imeni R.R. Shreder. It consists of 29 structural units: the

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\* Subsequently the organizations, enterprises and institutes, both those which have lost and those which retain their legal independence, will be referred to as structural units.

Uzbek Order of Lenin NII [Scientific Research Institute] for Horticulture, Viticulture and Wine-Making imeni R.R. Shreder (leading organization), four branches of this institute, of which three are zonal and one is technological (for wine-making); two zonal experimental stations (Fergana and Yuzhnouzbek); 15 fruit nursery sovkhoses, four experimental sovkhoses, three support points, an annual school for horticulturists and viticulturists, a sovkhos technical school and others. Actually, the association includes all of the scientific organizations engaged in carrying out horticultural, viticultural and wine-making work and all of the republic's nursery production farms. The NPO is fully responsible for determining the branch's scientific-technical policies: the breeding of varieties, the development of zonal industrial technologies for the production, storage and processing of products, the raising of planting stock and the training of personnel for the branch. It annually over-fulfills the plan for scientific studies. For example, in 1983 five varieties were turned over for state strain testing instead of three as called for in the plan and three new technologies were developed for the production and one for the processing of products.

The NPO satisfies completely the requirements of all of the kolkhoses, sovkhoses, associations and the republic's population for seedlings for grapes, fruit, berry, subtropical and forest-decorative crops and it ships 30 percent of them to other republics. Compared to the 1971-1975 period when an average of 15.6 million seedlings were grown here annually, in 1982 -- 43 million and in 1983 -- 53 million seedlings. The average area of agricultural land at a nursery production sovkhos of an NPO is 260 hectares and the nursery area -- 26-30 percent of the area set aside for perennial plantings.

The association operates on a profitable basis. The predominant portion of its earnings -- up to 90-95 percent -- is obtained from the sale of products in the production of which it specializes and 70-85 percent -- from the sale of seedlings. Production profitability during the 1981-1985 period amounted to 46.2 - 51.6 percent, annual profit -- more than 6 million rubles, or 50,500 rubles per 100 hectares of agricultural land.

The NPO is engaged in the introduction of scientific achievements on 150 farms in Uzbekistan. In 1961, 20 were introduced into production operations, in 1982 -- 23 and in 1983 -- 25 works. More than 75 percent of the republic's orchard and vineyard areas are occupied by crop varieties developed by the NPO. As a result, during the 10th Five-Year Plan the fruit crop yields for the Uzbek SSR as a whole increased by a factor of 1.7, grapes -- by a factor of 1.5 and the branch's profitability amounted to 42 percent compared to only 28 percent during the Ninth Five-Year Plan. Each ruble of expenditure for science is reimbursed in production by 12 rubles worth of additional net income. Moreover, 3-3.5 million rubles of the annual economic effect are obtained from the introduction of scientific achievements on the branch's farms, with the direct participation of the association's workers.

When determining the tasks and structure of a scientific production association, its specialization and the soil-climatic conditions of its operational region and also the biological peculiarities of the crops under cultivation or the types of animals are all taken into account. Thus, at the Viyerul NPO for Viticulture and Wine-Making in Moldavia, the vineyards of which constitute one fifth of all such areas in the country, responsibility has been assigned for

propagating new and promising varieties, for supplying elite and highly productive planting stock and for laying in maternal plantings for nursery production farms throughout the republic. In the case of other operational trends, the association performs the same functions as the NPO imeni R.R. Shreder, having within its structure a scientific-research institute, two experimental wine plants, a plant for experimental wine-making, a cost accounting KB /design office/ with an experimental production operation, an experimental farm, five sovkhoses, an annual school for viticulturists and a scientific-production laboratory. The scientific achievements of the Viyerul NPO are being employed extensively in mass production.

At the Selektsiya Scientific Production Association for Field Crops in Moldavia, 19 varieties were created and three all-purpose technologies were developed during the 1981-1983 period. Thirty five works produced by the association were introduced into operations during 1984. New industrial technologies for sunflowers, sugar beets and soybeans are being employed extensively in production. Thus a new production technology for sugar beets is lowering manual labor expenditures from a third to 5/12ths and production costs by 22-32 percent.

One half of all of the association's sowing areas is intended for obtaining super-elite, elite and 1st reproduction seed for 20 grain, pulse, forage and technical crops of 50-52 varieties. It provides the branch's farms with high quality seed through rayon seed production farms and for sunflowers and sugar beets -- directly, selling 23,000-25,000 tons annually, or more by a factor of 3.4 than the farms obtained prior to its creation. In addition, the association is fulfilling its plan for laying in seed for the state's resources. As a result of such organization for the seed production work, a sharp reduction has taken place in the time required for introducing new varieties into operations on the farms. Whereas earlier 5-6 years were required for the complete dissemination of a variety, today the Dnestrovskaya-25 winter wheat variety has occupied the area allocated to it during the second year following regionalization.

In recent years, the economic effect realized by the branch from the use of the scientific achievements of the Selektsiya NPO amounted to 9-9.4 million rubles annually, or 8.2-8.3 rubles per ruble of expenditure for science.

The Gibrid NPO is creating new corn and sorghum hybrids, it is developing industrial cultivation technologies, it is providing all of the republic's seed production farms with seed for 1st generation parental forms and it is providing methodological guidance for the growing of hybrid corn seed on all of the republic's seed growing farms.

Over a 10 year period of work, the association increased its production of corn and sorghum seed from an average of 968 tons during the 1971-1973 period to 2,825 tons in 1983, of which amount 1,813 tons were 1st generation parental forms, compared to the republic's requirement for only 1,000 tons. Here the seed production sowings for corn occupied 2,054 hectares in 1983, or 14.6 percent of the area of arable land. Under the methodological direction and control of specialists attached to the scientific production association, the seed production farms of Moldavia annually obtain 50,000-60,000 tons of 1st generation hybrid seed against a republic requirement calling for only 10,000 - 15,000 tons. More than 70 percent of all of the corn seed is shipped to other republics throughout the country. Owing to the mass propagation of the



Moldavskiy-385 and Moldavskiy-420 hybrid corn seed, almost all areas for the dissemination of this seed were occupied during the second year of its regionalization.

The placing in operation in 1979 of a corn grading plant having a productivity of 10,000 tons of seed made it possible to concentrate not only all primary seed production at the NPO, but also a portion of the 1st generation hybrid corn seed. The placing in operation of two more such plants, attached to the association, will make it possible to increase considerably the production of corn seed. At the present time, 80 percent of the entire area set aside for corn in the republic is occupied by the NPO's corn hybrids.

The association's scientific workers have developed an industrial technology for cultivating corn which uses the existing equipment and which ensures a yield of 50 quintals of grain per hectare. All of the republic's corn sowings are being cultivated using this technology and it is also being used throughout the country as a whole on an area of more than 2 million hectares. Labor expenditures have been reduced to one-third and amount to 1.5-2 hours per quintal of corn and production costs have decreased by 22.6 percent.

The association annually furnishes assistance in introducing its scientific achievements to 250-265 farms in Moldavia and, as a result, the branch's annual economic effect during 1983 amounted to 15.2 million rubles compared to an annual average of only 8.7 million rubles during the 10th Five-Year Plan, of which amount approximately 2 million rubles derived from the use of hybrids and 13.2 million rubles from the use of industrial technologies. Each ruble of expenditure for science was reimbursed by 16.6 rubles of income. An expansion in the volumes for the introduction of the scientific achievements of the Gibrid NPO led to a considerable increase in the material incentive fund for the workers attached to the scientific subunits.

The Dnestr Scientific Production Association for Vegetable Growing is satisfying the complete seed requirements for 24 crops for all farms and the population of Moldavia and a large portion of the seed is being shipped to other republics, since the varieties have been regionalized in a majority of the oblasts, krays and republics and occupy approximately 20 percent of the corresponding areas for vegetable-melon crops throughout the country on open ground and 40 percent -- on glass-covered ground. The association annually produces 25,000-27,000 quintals of seed at its five specialized sovkhoses. In all, seed plants occupy approximately 60 percent of the arable land area. As a result of integration within the same complex of workers representing different specializations, the Dnestr NPO developed industrial technologies for the production of tomatoes, onions, cucumbers, sweet peppers, eggplant, carrots, cabbage and green peas. Cadres of expert vegetable growers capable of mastering scientific achievements in mass production are being trained in an annual school.

The scientific-production associations of Moldavia include in their structures cost accounting scientific-production laboratories -- a connecting element between science and production. The leader of a laboratory is the deputy general director for the introduction of scientific-technical achievements.



The experience of the Kirghiz Scientific-Production Association for Livestock Husbandry is deserving of further dissemination. This is a large scientific center that is closely associated with the branch's farms. Ninety six percent of the sheep, 70 percent of the cattle and 20 percent of the poultry in the republic are represented by strains developed at this center. The association controls breeding work throughout the republic and it handles those problems concerned with the feeding, maintenance, breeding and treatment of animals.

The Kirghiz NPO has converted over to the new system of economic stimulation for the development and introduction of scientific achievements. The economic incentive fund for all workers attached to scientific structural units is formed only by means of deductions from the actual economic effect realized from the introduction of its scientific achievements into production operations. This creates interest on the part of the entire collective in the extensive use of the results of scientific studies on farms of the association and the branch.

In the process, approximately 60 percent of the material incentive fund is expended for awarding bonuses directly to the executive agents and 40 percent -- to those who assist them, that is, to all other workers of the association. The direct executive agents can be awarded bonuses in the amount up to six official salaries and those who assist them -- up to one. The maximum amount of a bonus is established at 720 rubles in accordance with the results realized from the introduction of scientific achievements.

In 1983 the association furnished assistance to 118 farms throughout the republic, with 40 of them receiving such assistance on the basis of economic agreements and the remainder -- by way of creative collaboration or author's supervision.

The link between science and production in agriculture is being carried out successfully by other scientific-production associations. The majority of the NPO's have increased their production of new products for the branch's farms by a factor of 2-4 -- high quality seed and seedlings, pedigree animals and so forth. In achieving these successes, importance was attached to ensuring that the scientific-technical subunits of NPO's possessed no advantages with regard to the financing of scientific-research and experimental-design work or in the number of scientific personnel, compared to other scientific-research institutes.

At the same time, great opportunities are available for intensifying the effect of science on accelerating scientific-technical progress in agriculture and for achieving more extensive development of the scientific-production associations, particularly in horticulture, viticulture, vegetable growing, potato production, cotton production, flax cultivation, bast crops, rice, soybeans, in cattle husbandry, sheep husbandry, swine husbandry, silk production, apiculture, in mechanization and others.

When organizing NPO's, a requirement exists first of all for scientifically validating the feasibility of their creation. Towards this end, use can be made of methodological recommendations prepared by workers at the All-Union Scientific-Research Institute of Agricultural Economics and allied institutes, jointly with workers from the USSR Minsel'khos /Ministry of Agriculture/, in

connection with the technical validation for the creation of scientific-production associations in agriculture\*.

An analysis of the work of scientific-production associations in agriculture has shown that in the case of many associations their structure and size and the disposition and specialization of structural units leave a great deal to be desired (at times, the scientific-production associations include all-purpose oblast agricultural experimental stations with their experimental farms).

When forming the structure for scientific-production associations and organizing their activities, importance is attached to observing the use of a program-special purpose approach. The structure, number, size and disposition of the structural units in an NPO should be determined based upon the tasks assigned to them, the type of association, the possible level of its specialization, the branch specifics, its size, production volumes, the level of scientific-technical progress, the systems for seed production and nursery operations, the organization of breeding work at the present time, the prospects for and the number and peculiarities of the soil-climatic zones for services, the coefficient for seed propagation and other conditions. One of the chief reasons for the low effectiveness of some NPO's -- their inadequate specialization in the production of new products for the branch's farms and the multiple-branch nature of their production activity.

When forming the structure of an NPO, profitable sovkhoses which specialize in the association's profile should ideally be included and a large department should be formed for introduction into production. This department can be an independent structural unit for operating on a cost accounting basis or it can be included in the structure of a leading scientific-research institute as one of its subunits. The tasks of the department -- the development of annual and five-year plans for the introduction of scientific achievements into use on the branch's farms and providing them with practical assistance on an economic contractual basis. A need exists for creating planning bureaus or departments in the NPO's which, based upon agreements, will carry out the planning of new and the modernization of old orchards and vineyards, crop rotation plans, livestock facilities and other operations at kolkhozes, sovkhoses and inter-farm and agroindustrial enterprises and associations, depending upon the association's specialization. The scientific-production laboratories created on the basis of NPO farm resources have proven their worth. At the present time, independent structural units for the introduction of scientific achievements are available only at nine agricultural NPO's and at the others -- departments for the introduction of such achievements.

The combining of science with production must be promoted by an economic mechanism which ensures an acceleration in the "research - production" cycle, the carrying out of all-purpose studies and works, an expansion in the opportunities for increasing the production of new products for the branch's farms, balance in the work of all NPO subunits in connection with the work volumes and schedules, proper timing between the completion of a study and the extensive introduction of its results into mass production in the branch, optimum specialization in production operations, a community of interest among

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\* Moscow, VNIESKh /All-Union Scientific Research Institute of Agricultural Economics/, 1984.

all NPO workers in the final results of their activities and a long-range approach for the development of the association.

Program-special purpose planning for the work of NPO's must on the whole be based upon the work of structural units and subunits, creative collectives and each scientific worker in accordance with a network graph, which will be based upon order-tasks for scientific-research and experimental-design developments, made available to the NPO's by higher organizations. However, the required indicators, especially for the creation of economic incentive funds, are quite often not reflected in them.

The order-tasks must reflect the mutual obligations of the customers and executive agents: the work, stages and schedules for carrying out the work; the natural, technical and cost indicators which must be achieved as a result of the work being carried out; the amounts, forms and sources for financing the scientific-research operations and economic incentives for the executive agents; the possible volume for the introduction of scientific works and the expected annual economic effect in agriculture and other branches of the national economy (based upon mutual agreements); the requirements for new products and for additional monetary and material resources for introducing the results of studies.

In our opinion, such order-tasks must be used as the basis when planning the production activities of NPO's. The chief tasks must be reflected in the production-financial plans of the farms -- series production of high quality seed and seedlings of high reproductions (by crops, varieties, reproductions), pedigree young cattle and poultry stock (by types, strains, classes), the production of light series equipment (by marks) depending upon the association's specialization; a production check and the working out of new industrial technologies, the introduction of scientific achievements and so forth. In the interest of optimizing planned production activities, every attempt should be made to achieve maximum possible specialization of the NPO in the work profile of the association's leading scientific-research institute.

In connection with the organization of RAPO's, which are authorized to plan the volumes of state procurements of agricultural products for all farms in a rayon, independent of their subordination, the conditions for the work of specialized NPO farms have become more complicated. Quite often they are provided with the procurement plans in the absence of their specifics being taken into account and to the detriment of the production of new products for the branch's farms. The RAPO does not bear responsibility for fulfillment of the plan, since the sale of high quality seed or high reproductions and pedigree young stock is not included in the plan for state purchases of agricultural products. Two variants are recommended for eliminating this shortcoming. The first -- when the plan for the sale of the new products, following its approval by the appropriate organs for presentation to the NPO, from the standpoint of the association's farms, is made available to the RAPO to which these farms belong. The best solution consists of ensuring that all of the NPO farms and the association are on the whole able to sell only surplus products on the basis of contractual agreements.

The centralization of a portion of the economic incentive fund for NPO and RAPO farms is also not entirely correct. According to existing statutes, the right to such centralization is used by a scientific-production association. And the NPO farms can transfer a portion of the funds to a RAPO for the construction of projects definitely needed by them, by agreement with their leading organ.

The NPO's must be converted over to cost accounting operating principles, using order-tasks for scientific-research and experimental-design work obtained from higher organizations, economic contracts with other departments, enterprises and organizations and complete cost accounting in production operations. Economic stimulation and material incentives for NPO workers should be carried out depending upon the final operational results -- national economic effect from the use of its scientific achievements and the profit realized by the association.

In order to strengthen the link between science and production, it is our opinion that the associations should ideally be authorized to centralize up to 10 percent of the profits of their farms for financing scientific-research and experimental-design work, the need for which has become apparent within the NPO and as a result of operational contacts with the branch's farms and also for developing the logistical base for science.

The work of the NPO's, as an organic individual unit, must be supported on the basis of organizational, production and economic unity among all elements of the "research - production" cycle and material interest on the part of the association's entire collective in the final results of its activities -- accelerating scientific-technical progress throughout the branch and carrying out the country's Food Program.

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AGRO-ECONOMICS AND ORGANIZATION

CONTRACT OBLIGATIONS FOR RAISING LIVESTOCK IN PRIVATE PLOTS

Moscow KHOZYAYSTVO I PRAVO in Russian No 6, Jun 85 pp 25-27

[Article by V. Sidorenko, deputy director of the USSR Ministry of Agriculture Main Administration of Auxiliary Enterprises and Trades and Auxiliary and Private Plots: "In Order Not to Violate Obligations"]

[Text] A. L. Samofal, a resident of the village of Novokursk in Dnepropetrovsk Oblast turned to us with a letter to the editor. In it he raises several questions related to the fulfillment of contracts for raising livestock and poultry belonging to kolkhozes and sovkhoses on the private plots of citizens. Other readers have also turned to us with a request to explain the order for carrying out such agreements as well as agreements concerning the procurement of livestock, poultry and surplus milk from village residents.

To some degree, questions related to the fulfillment of contracts involving the raising by citizens of livestock and poultry belonging to kolkhozes and sovkhoses were reflected in the article by I. Avilina entitled, "The Responsibility of Enterprises and Citizens," which was published in issue No 4 of our journal this year. At the same time readers are interested in other aspects of this and other contracts, which also require clarification. For this reason the editors have asked for an elucidation of the question by the deputy director of the Main Administration of Auxiliary Enterprises and Trades and Auxiliary and Private Plots of the USSR Ministry of Agriculture and candidate of economic sciences, V. Sidorenko. We are publishing his consultation below.

In recent years it has become common practice to conclude contracts between kolkhozes and sovkhoses and citizens with regard to raising and procuring livestock and poultry as well as with regard to the procurement of surplus milk from the private plots of village residents.

Corresponding model contracts were confirmed by USSR Minselkhoz, USSR Minfin [Ministry of Finance], USSR Minzag [Ministry of Procurement] and USSR TSU



[Central Statistical Administration] on 12 March 1981 on the basis of resolution No 27 of the CPSU Central Committee and USSR Council of Ministers from 8 January 1981, "On Supplementary Measures to Increase Agricultural Production Output on the Private Plots of Citizens." These measures foresee mutual obligations of enterprises and citizens in the process of producing and procuring products from village residents.

As practical experience shows, the conditions of model agreements basically further the interests of both parties and regulate their interrelations correctly.

The parties must unfailingly fulfill the obligations adopted by them in the agreement. Unfortunately, in some republics and oblasts enterprises often violate them. For example, they do not allocate the feed as specified by the contract, they do not earmark additional plots of land for citizens in order to procure feed, mow hay and pasture cattle, and they do not allocate means of transportation to citizens in order to enable them to ship feed.

Kolkhozes and sovkhoses do not always carry out zooveterinary treatment of animals that are transferred to citizens for raising. Some enterprises do not adhere to the schedules for receiving fattened cattle as established in contracts and do not provide means of transportation for shipping cattle to reception points.

All of this gives rise to letters and justified complaints by citizens to party, soviet and management organs and to editors of newspapers and journals.

It should be said that agreements concluded by enterprises with citizens, particularly with regard to cultivating livestock and poultry, do not always correspond to model contracts.

In Kuybyshev Oblast, for example, kolkhozes and sovkhoses usually utilize contracts characterized by arbitrary form and content. In the enterprises of Lipetsk Oblast contracts dealing with the procurement of livestock from the population do not specify the sale-procurement schedule, quantity, weight or price; the quality, types and cost of feeds which the kolkhos or sovkhos has pledged to sell the citizen are not specified, and so on.

Of course, the absence of specific obligations in such contracts makes it difficult to carry them out and often gives rise to disagreements between parties.

Disagreements arise not only as a result of the improper conclusion of contracts. Many citizens, for example, interpret the content of point 1.4 of the Model Agreement on Livestock Raising in different ways. It states that payments for livestock are made per kilogram of live weight minus a deduction for the contents of the alimentary tract and for the base weight of the animal according to contract prices but no higher than established state procurement prices for livestock and poultry of the corresponding condition. For example, in Dnepropetrovsk Oblast such prices for cattle have been established in the following amounts (in rubles per ton of live weight): highest nutritive

state--1,660 rubles, average--1,384, below average--1,038 and thin--832 rubles.

Consequently, kolkhozes and sovkhoses of this oblast have the right to procure cattle from the population according to prices that do not exceed 1 ruble 66 kopecks per kilogram live weight. However, some enterprises illegally conclude contracts for livestock procurement from citizens with the payment of larger sums than decreed, illegally establishing supplements to state procurement prices for calves with an elevated weight.

Here we should keep in mind that the payment of 35-percent and 50-percent supplements for such livestock, procured from the population according to contracts and sold to the state, is made to kolkhozes, sovkhoses and other agricultural enterprises. These supplements should not be paid to the population. As soon as the aforementioned violations are allowed, local agricultural organs and their control-revision services must strictly watch for rigorous adherence by kolkhozes and sovkhoses to established state procurement prices in accounts with the population and they must radically eliminate similar phenomena by bringing guilty parties to justice.

It should be noted that even if citizens deliver the livestock raised by them not to the kolkhoz but to a meat combine, they still will receive 1 ruble 66 kopecks per kilogram live weight, without bonuses, for livestock that is in the highest nutritional state.

If disagreements arise, it should be kept in mind that according to resolution No 21 of the Plenum of the USSR Supreme Soviet dated 15 November 1984, which incidentally was published in this year's issue No 1 of the journal KHOZYAYSTVO I PRAVO, payments for livestock and poultry raised and for products procured from the population are made according to the prices indicated in the contract. If they are higher than state procurement prices or if they are not mentioned in the contract, state procurement prices in effect at the time the contract is carried out are utilized. In examining similar matters the court will act on the basis of the aforementioned resolution.

Sometimes citizens ask how bonuses are spent that are received by an enterprise for selling livestock in a high nutritive condition to the state. The fact is that the obligations which kolkhozes and sovkhoses take upon themselves when concluding contracts for the production and procurement of livestock, poultry and milk from citizens involve certain expenditures by these enterprises (involving raising calves, receiving and shipping products, rendering aid in feed procurement and so forth). For this reason, a part or even the entire supplementary profits received by kolkhozes and sovkhoses from the delivery of cattle in high nutritional condition and from the sale of products to the state above the level achieved during the 10th Five-Year Plan is spent in compensation of the aforementioned expenditures.

Citizens often ask why it is that in different kolkhozes and sovkhoses located within the same region there are different prices for feed sold to the population.

We should not forget that in accordance with model agreements, kolkhozes and sovkhoses must sell citizens feed produced by them according to plan costs, and purchased feed--according to the price paid to acquire it, including delivery expenditures.

Consequently, in each specific enterprise the price of feed may vary since the plan cost of feed will naturally differ according to the different economic conditions found within each enterprise. Let us say that in one sovkhos the plan cost of 1 quintal of hay from perennial grasses equals 2.4 rubles, and in another--3.2 rubles; this brings about corresponding difference in feed prices.

Resolution No 27 of the CPSU Central Committee and USSR Council of Ministers of 8 January 1981 recommended that kolkhozes and sovkhoses provide citizens who have concluded contracts with them to produce livestock products with additional plots of land for the purpose of cultivating feed crops by making use not only of private plots but also, if necessary, by using land that belongs to the enterprise and that is temporarily out of use. A similar standard has been foreseen in model contracts with regard to allocating supplementary plots of land.

In a number of places (Lithuania, Belorussia, Latvia and other republics), following the desire of kolkhoz farmers and sovkhos workers, about one-third of private plots are included in the total land mass belonging to the enterprise. This provides the opportunity to help the population, for a fee, with mechanisms for cultivating agricultural crops and to significantly decrease expenditures of labor and time by citizens in the cultivation of their plots.

Here is another important question. Some kolkhozes and sovkhoses groundlessly charge extra man-days and wages to citizens for raising livestock on private plots by contract while this livestock is paid for according to state procurement prices. For example, in the enterprises of the Ukrainian SSR Transcarpathian Experimental Station the time spent by citizens on the contract raising of cattle in outbuilding facilities (with part-time employment of workers in public production in the course of the year) is included in work records.

Still, is it fair to charge extra work time and wages to the citizen for the production of livestock, poultry and milk on private plots according to contracts with kolkhozes and sovkhoses? It is if these products are produced and procured according to conditions related to work within the home. In this case the citizen is not paid the entire price for products according to state procurement prices but only part of it in the form of wages for the volume of production produced and sold by him. In this case livestock, poultry and milk are the property of enterprises and payments for them cannot be made to the home-worker according to contractual or state procurement prices.

The USSR Ministry of Agriculture, in agreement with the central committee of trade union workers in agriculture, confirmed on 1 June 1982 the Instructions on Labor Conditions for Home Workers in Agriculture. However, this form of economic relations between the population and kolkhozes and sovkhoses still

has not become widespread. As a rule, livestock, poultry and milk produced on private plots of citizens are procured by kolkhozes and sovkhoses according to state procurement prices.

I would like to mention one more thing. Directors and specialists of agricultural organs, kolkhozes and sovkhoses must constantly compare their activities with the conditions set forth in resolution No 27 of the CPSU Central Committee and USSR Council of Ministers of 8 January 1981 and in other legal documents and to steadfastly strive for strict adherence to them when organizing work to increase production output on the private plots of citizens and when providing help to these citizens.

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## FORESTRY AND TIMBER

### CHIEF USSR TIMBER PORTS NAMED: EXPORT MATERIALS DESCRIBED

Moscow KONTROL KACHESTVA I SDACHA EXPORTNYKH LESMATERIALOV in Russian 1985  
(signed to press 29 Nov 84) pp 206-207

[Section 69, Chapter 12 of the book Control of Quality and Delivery of Export Timber Materials, by V. S. Leonov and F. P. Sadovnichiy, Izdatelstvo "Vyshaya shkola", 2000 copies, 224 pages ]

[Excerpt]

#### Section 69. Main Forest Ports of the USSR

The most important outlet points (seaports, specialized forest products ports and rayons) are Arkhangelsk, Igarka, Leningrad, Novosibirsk, Nakhodka, Vostochnyy, Vanino, Vladivostok, and Mago. The most significant in terms of scale and importance are operations for the export of lumber from Arkhangelsk and Igarka and commercial timber from the Far Eastern ports. Large volumes of forest products move through the Leningrad and Novorossiyskiy forest products ports, and pulp and paper goods through Baltic ports and those on Sakhalin.

The Severoleseksport [Northern Forest Products Export] Production and Forest Products, Sawn Timber Export Association in Arkhangelsk produces one-third of the lumber produced in the Soviet Union. Export lumber is about 65 of the association's output. This association includes a number of forest product export enterprises in Arkhangel Oblast. All enterprises are specialized in the production of export lumber. This lumber is loaded on to ocean going ships at the Arkhangel, Onega, Mezenskiy and Pechora ports or is hauled by railroad to the Leningrad or Novorossiysk forest products ports for subsequent shipping to European countries and Mediterranean countries. About 40 percent of export lumber hauled by maritime transport passes through White Sea ports. Enterprises in Arkhangelsk have modern equipment for drying, preparing and bundling packing lumber. This has permitted them to convert to new technology for producing and preparing export lumber. During 1975-1980, 100 percent of the export lumber going through Arkhangel group of plants was bundled.



The Igarka forest products port is on the right bank of the Yenisey River and is the only river and seaport linking the Yenisey to the Northern Sea Route. The navigation season is from 10-15 June to 15-20 October in ice free water and longer in ice. The water levels are constant and stable. The Igarka port can simultaneously handle 12-15 ocean going and more than 20 river ships. The amount of material loaded reaches 20,000 cubic meters daily. During a navigation season this port loads more than 1,250,000 cubic meters of export lumber.

The Leningrad Forest products port is an independent industrial enterprise and is subordinate to the USSR Ministry of the Timber, Pulp and Paper and Wood Processing Industry. The port annually handles more than 200 ships. On an average it loads about 3,000 m<sup>3</sup> daily.

Far Eastern Ports. About 6 million cubic meters of forest products are shipped through Far Eastern Ports. The main share (90 percent) of this is round wood, 500,000-600,000 m<sup>3</sup> of wood chips and 300,000-400,000 m<sup>3</sup> of lumber are shipped.

The presence of abundant natural resources in the eastern parts of our country and their shortage in our neighbor Japan make it possible to predict an increase in forest products exports in the Far East over the long term. Forest products play a leading role in our trade with Japan. The possibilities for the further development of Soviet-Japanese trade are linked to the presence of rich forest resources in East Siberia and the Far East and the considerable import potentials of the Japanese market. The raw material character of exports from this region is due to the insufficient development of the woodworking and pulp and paper industry in the Far East. The limited exports of finished lumber from the USSR to Japan are a result of the labor intensiveness of such work and the specifics of demand.

Soviet forest product exports from the Far East are now oriented mainly towards Japan. The main factor determining the export specialization of the forest products industry in the Far East is the lack of large customers in the region. Also, it is unprofitable to export unprocessed wood long distances within our country. Exports of wood from the USSR to Japan have grown steadily in the post war period.

The 1968 signing of the Long Term General Agreements on the exploitation of the forest resources in Siberia and the Far East and the provision of Japanese credits for the purchase of machinery, equipment and materials for forestry industry development in these regions was a qualitatively new stage in the expansion of forest products trade between the USSR and Japan.

Nakhodka is the main Far Eastern port. Every year it loads ships with different types of round wood, lumber, cellulose, paper and other forest products. More than 1 million m<sup>3</sup> of forest products are annually shipped from Nakhodka. In the second half of the 1970's the export of more than 1 million m<sup>3</sup> of commercial timber and wood chips annually began at the specialized and highly mechanized ports of Vostochnyy on Vrangeli Bay near Nakhodka. At Vladivostok most loading is done by the "freight car -- on board

ship" scheme, and only saw logs are loaded. On an average the port's annual loading are 700,000 m.

The Port of Vanino loads assortments of round wood and chips. Annual volume through this port is about 1.5 million m<sup>3</sup>.

The roadsteads of Mago and the ports of Mys Lazareva and Nikolayevsk na Amure work from May to November. The total volume of annual freight is about 600,000-700,000 m<sup>3</sup> annually.

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## FORESTRY AND TIMBER

### TIMBER MACHINERY REPAIR PROBLEMS EXAMINED

Moscow LESNAYA PROMYSHLENNOST' in Russian 6 May 85 p 2

[Article by V. Shlemin: "Tractor under Repair"]

[Text] More than 25,000 trailer-tractors of various types are operating today in the timber industry. Approximately 150 million cubic meters of timber--that is the load which is placed on their steel shoulders every year. But no matter how strong and enduring they are, even metal sometimes fails to hold up. And then the tractor must be repaired. Fast and in a skilled manner. Unfortunately, losses due to breakdowns are still great. There are frequent cases when repairs are delayed, or performed so poorly that there are times when the operator cannot drive it. Why and what are we losing because of the breakdowns of trailer-tractors? And what is being done to correct this situation?

#### A Base Is Needed

First of all, do you know what a ROB is? If not, then let me explain. ROB is an abbreviation for repair-and-service base, i.e., a complex of enterprises and subdivisions, created in order to ensure the solutions of the problem of restoring equipment which is out of order. To put it more simply, these are repair plants, machine shops, depots, garages, and centers for technical servicing.

At first glance it looks like we are handling this matter quite well. The sector has a total of more than 70 repair plans, where every year more than 18,000 tractors and machinery mounted on them are "treated." Last year, for example, just at enterprises under the jurisdiction of the timber-industrial and production-type timber-processing associations about 7,000 trailer-tractors underwent overhaul. In addition to this, we have at our disposal more than 1,000 workshops and almost 2,000 garages.

But this, so to speak is only one aspect--the quantitative one. But there is also, alas, another aspect. Most of the above-mentioned facilities are built and fitted out 25-30 years ago, i.e., they are suitable only for servicing obsolete equipment, that which has practically been taken out of production.

The director of the Cherepovets Machine-Repair Plant, A. Filinov, in talking about the problems of managing his business, was compelled to admit that it is not suitable for present-day needs.

"Well, what can be said," he stated irritably, "if the enterprise, built more than 20 years ago, has remained practically unchanged since that time: it has neither been expanded nor modernized--if the machine-tool inventory has become worn out and obsolete, if . . . . But there are so many ifs.

Specialists have calculated that for normal operation the ratio between the productions costs of a repair base and the fixed capital assets should be approximately 0.75 ruble to 1 ruble. Then, and only then, would there be no acute problems. Petroleum workers and motor-vehicle transport workers are close to these indicators. But we are far from such proportions. The maximum which the timber sector has been able to achieve is 20-25 kopecks per ruble of fixed capital assets.

Things are no better with regard to the working conditions in our ROB. Labor mechanization has compromised only 16-17 percent; less than a third of the facilities have areas for everyday needs, and scarcely half are provided with a water supply.

The base is weak. And the results are obvious. Thus, the idle time spent by tractors being repaired or waiting to be repaired during the last 10 years has not only declined but has even increased. In 1975, on an average, it amounted to 96 days, while last year it amounted to 101 days. And so the trailer-tractor loses for this reason a considerable portion of the work year. And if we take into account the fact that every year about a third of these machines undergoes repairs, then it is not difficult to calculate how many days a year thousands of machines stand idle in plants, garages, yards, and workshops!

Well, but what about our plants and the specialized, large enterprises. Special discussion will be devoted to them.

A Repair or Body Shop, or . . . ?

There are two plants in Petrozavodsk. One of them--the Onega Tractor Plant--produces the TDT-55. The other one--the Petrozavodsk Repair-and-Machinery Plant--repairs them. They both, before discharging the trailer-tractors from their gates, in accordance with the GOST [State Committee for Standards], must paint them. Until recently at the Petrozavodsk Plant this operations was performed by hand. In any case, the cabs were painted in exactly this manner. Soon the enterprise's managers, having noted that the personnel turnover in this section was increasing, decided to take timely measures. They acquired a painting chamber. To be sure, it was not for tractor cabs but rather for passenger and automobiles. Furthermore, it was imported. They took a brigade from the non-standard equipment of the tractor-repair workshop and set to work on modernization.

However, certain complications arose. A tractor cab is not a Zhiguli; it cannot move under its own power. The enterprise was compelled to set up a conveyor of their own production. And the additional proved not to fit with regard to clearance. They raised the chamber into a special footing. For days and even months the repair workers engaged in activities which were not properly their own instead of simply requesting their neighbors to share in handing the extra work. But what about the basic production? Unfortunately, at this plant they no longer seem to know exactly what is basic. Because, you know, the chief pride here is considered to be, for example, the cutting train (a complex of machines for producing chips).

Unfortunately, such a picture is becoming typical for an entire series of sectorial repair-and-machinery plants. Inquire in Kirov as to what the local repair plant is renowned for among their own wood-cutters. They will answer: in the first place, for the fact it produces a new cross-cutting unit. The Abakan Plant makes dump-trailer machines, while the Syktyvkar Plant produces branch-cutting machines. Recently, upon the initiative of a number of managers of associations, the enterprises under their jurisdictions have begun to orient themselves more and more toward machine building. Let us not speak about the fact that, with rare exceptions, the machines built under such conditions are both expensive and metal-consuming as well as uneconomical. Let us turn to some other questions. It is really possible that in the matter of providing repair work for this sector there are no remaining bottlenecks, that all the problems of high-quality and rapid restoration of machines have been solved? Unfortunately, there is still a long way to go before reaching this stage.

Here is what was ascertained, for example, by a check-up conducted by the GOST organs at the Khabarovsk Avtoremles Plant: ""What we noted was a low production standard, parts and assembly-units lying about in a heap on the floor, technological processes were not provided with means of measurement, out of 27 technical operations, the hydraulic system and the water pump were not being tested, the rear axles of the TT-4 tractors were not being checked out under loading, nor was the power of the current being monitored in the soldering and welding section."

"Well, but that really is not our concern," those same people from Kirov might say.

Their concern! But, you know, the Kirov Center for Standardization and Methodology noted in due course that the "technological processes are not being observed by the plant."

The Propriator is the Master

"Repair work without responsibility--that is the cause of a great many troubles," complains V. Zayedinov, chief of the Main Mechanical Administration, USSR Ministry of the Timber, Pulp and Paper,, and Wood-Processing Industry.



But just what exactly is meant by "repair work without responsibility"? Here's what. Let's suppose two tractors arrive at a plant. One has been operated for 2,000 motor hours, the other for 4,500. They are taken apart, cleaned, the parts and assembly units all go into one "crib." And when, after being repaired, they begin to be assembled, nobody will analyze which assembly or unit belongs to one tractor and which to the others. As a result, a trailer-tractor comes out through the gate already with an "undermined" resource. Therefore, it may be expected back again soon.

But let's do a little calculation. A TT-4 tractor costs about R9,000. To give it a complete overhaul costs about R4,000. It turns out, then, that repairing a trailer-tractor twice costs practically as much as buying a new one.

So, maybe it will "outlive itself?" No. And here's why.

Unfortunately, we have not yet reached the stage of being able to fully supply the sector with tractors. Nor do we yet have the capacity to immediately replace a trailer-tractor which has been taken out of operation with a new one. In order to somehow regularize the writing of equipment, there are norms. And it is in accordance with these norms that a period of time is specified which is required for a machine to pay for itself.

The motor resources of the TT-4 amount to 4,800 motor hours. The amortization amounts are calculated for the tractor being in operation for slightly more than four years: coming to 24.4 percent annually. And, on an average, a tractor-trailer is due for major overhaul at around three and a half years. But how much does this turn out to be in actual fact?

"In all, some 1500--1800 motor hours prior to major overhaul," asserts V. Zayedimov.

And so it turns out that the amount is less than half of the norm? But, of course, this also means that the machine only half pays for itself. And, as a result, the sector loses millions and millions of rubles.

And it is here that it is important to examine why a tractor-trailer does not reimburse its own resource. Who is to blame for this?

"Somehow the tractors have become very weak," said one brigade leader from Vologda, frowning in irritation. "You know what they should do? Weld rails onto the bottoms. And if they don't reinforce them, the entire insides twist out."

"The pins of the balancers and crankshifts on the tractors are always flying off, as well as the suspension arms," complain the mechanics from Irkutsk.

But what, after all, is the cause of this trouble?

"The above-mentioned damages and breakdowns," V. Zayedimov advises, "originate from driving onto high obstacles. To put it more briefly, against stumps."

And so everything is really quite simple. The rolling-drum operator was too lazy to cut out the stumps, and the tractor bottoms hit up against them. If a caterpillar tread hits up against them, a suspension arm or a balancer pin flies off. But, of course, there are regulations in accordance with which draw plates are supposed to be manufactured, loading areas, etc. Even though that is so, there are few persons who carry them out. Particularly in wintertime, when it is difficult to get to the stumps. However, the state of affairs in the forest is only slightly better during the summer.

These days more and more attention is being paid to aggregate equipment, to multi-operation machines. All honor and respect to them, as it is said. But the logger has become accustomed to tractor-trailers. Furthermore, he has already heard and read on more than one occasion that the TT-4 is a poor tractor and that the TDT-55 is weak. And so a tractor operator once in a while tries out such "imperfect items"; why stand on ceremony with them? And after that there is no saving the tractor-trailer.

To be sure, it sometimes happens that a logger unintentionally puts a tractor out of operation. Consider the following, for example. Quite recently in the forest they made warming stations for the trailer-tractors. Even though they were of the tent type, made of tarpaulin, they did have stoves. But what about nowadays? At enterprises in the European part of the country you cannot find anything like this in mass manufacture.

In short, it is exactly as the proverb says: let the tractor work, it is made of iron.

At the April (1985) Plenum of the CPSU Central Committee it was noted, in particular, that now, as never before, it is important to achieve maximum operations efficiency. And, in the first place, this can be attained by means of equipment, if it is utilized with the maximum yield, and the losses connected with poor work organization are reduced to a minimum. And this must now be the target aimed at by the efforts of production commanders, scientists, designers, repair workers, timber-procurement people--in short, all those laboring in this sector.

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